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The Bulletin of the University of Minnesota

*The College of Dentistry
Announcement for the Year
1919-1920*



UNIVERSITY OF ILLINOIS

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| 1919 | | | | | | | 1920 | | | | | | | | | | | | | |
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| JULY | | | | | | | JANUARY | | | | | | | JULY | | | | | | |
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UNIVERSITY CALENDAR

1919-1920

1919

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|-----------------|------|-----------|---|
| September | 20 | Saturday | Payment of fees closes, except for new students |
| September 24-30 | Week | | Examinations for removal of conditions, and entrance examinations |
| September | 29 | Monday | First semester evening extension classes begin |
| September 29-30 | | | Registration days |
| September | 30 | Tuesday | Payment of fees for new students closes |
| October | 1 | Wednesday | Fall quarter begins |
| October | 16 | Thursday | Senate meeting, 4:00 p.m. |
| November | 27 | Thursday | Thanksgiving Day; a holiday |
| December | 18 | Thursday | Senate meeting, 4:00 p.m. |
| December | 23 | Tuesday | Christmas vacation begins 9:00 p.m. |

1920

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| January | 2 | Friday | Christmas vacation ends 8:30 a.m. |
| January | 2 | Friday | Winter quarter begins |
| January | 23 | Friday | First semester evening extension classes close |
| February | 2 | Monday | Second semester evening extension classes begin |
| February | 12 | Thursday | Lincoln's Birthday; a holiday |
| February | 19 | Thursday | Senate meeting, 4:00 p.m. |
| March | 25 | Thursday | Winter quarter ends |
| April | 1 | Thursday | Spring quarter begins |
| April | 2 | Friday | Good Friday; a holiday |
| May | 20 | Thursday | Senate meeting, 4:00 p.m. |
| May | 21 | Friday | Second semester evening extension classes close |
| June | 13 | Sunday | Baccalaureate service |
| June | 16 | Wednesday | Spring quarter closes |
| June | 17 | Thursday | Forty-eighth Annual Commencement |
| June | 18-19 | | Registration days for Summer quarter |
| June | 21 | Monday | Summer quarter begins |
| September | 3 | Friday | Summer quarter closes |

THE COLLEGE OF DENTISTRY

FACULTY

- MARION LEROY BURTON, Ph.D., D.D., LL.D., President
CYRUS NORTHROP, LL.D., President Emeritus
ALFRED OWRE, B.A., M.D., C.D., D.M.D., Dean, Professor of Theory and Practice of Dentistry, Dental Metallurgy
BERT G. ANDERSON, D.D.S., Assistant Professor of Prosthetic Dentistry
MOSES BARRON, B.S., M.D., Assistant Professor of Pathology
JERE BAXTER, Major, U. S. A., Assistant Professor of Military Science and Tactics
RICHARD OLDING BEARD, M.D., Associate Professor of Physiology
ELEXIOUS T. BELL, M.D., Associate Professor of Pathology
HENRY C. BERTELSEN, First Lieutenant, U. S. A., Assistant Professor of Military Science and Tactics
PETER J. BREKHUS, B.A., D.D.S., Associate Professor of Crown and Bridge Work
EDGAR D. BROWN, Plm.D., M.D., Associate Professor of Pharmacology
FRANK H. BURTON, Colonel, U.S.A., Professor of Military Science and Tactics, Head of Department
ARTHUR E. CLARK, Captain, U.S.A., Assistant Professor of Military Science and Tactics
LILLIAN COHEN, Ph.D., Assistant Professor of Chemistry
LOUIS J. COOKE, M.D., Director of Physical Education for Men
OSCAR COOPERMAN, D.D.S., Assistant Professor of Prosthetic Dentistry and Oral Anatomy
NORMAN J. COX, B.S., D.M.D., Assistant Professor of Operative Dentistry
GEORGE M. DAMON, D.D.S., Professor of Prosthetic Dentistry and Oral Anatomy
CHARLES A. ERDMANN, M.D., Associate Professor of Applied Anatomy
MAX E. ERNST, LL.B., D.D.S., Assistant Professor in Orthodontia and Dental Jurisprudence
CARL O. FLAGSTAD, D.D.S., Assistant Professor of Prosthetic Dentistry and Orthodontia
JOHN J. FLATHER, Ph.B., M.M.E., Professor of Mechanical Engineering
WILLIAM K. FOSTER, LL.M., Assistant Director of Physical Education for Men
HENRY S. GODFREY, D.M.D., Professor of Operative Dentistry
ROBERT O. GREEN, D.D.S., Associate Professor of Operative Dentistry
WILLIAM A. GREY, D.D.S., Assistant Professor of Oral Surgery
CHARLES A. GRIFFITH, D.D.S., Associate Professor of Oral Surgery
MELVIN E. HAGGERTY, Ph.D., Professor of Educational Psychology
ROBERT A. HALL, Ph.D., Assistant Professor of Pharmacology

- THOMAS B. HARTZELL, D.M.D., M.D., Professor of Oral Surgery, Pathology and Hygiene
- ARTHUR T. HENRICI, M.D., Assistant Professor of Bacteriology
- CYRIL A. HERRICK, B.A., Assistant Professor of Rhetoric
- ARTHUR D. HIRSCHFELDER, B.S., M.D., Professor of Pharmacology
- WILLIAM H. HUNTER, Ph.D., Associate Professor of Chemistry
- CLARENCE M. JACKSON, M.S., M.D., Professor of Anatomy
- LAUDER W. JONES, Ph.D., Professor of Chemistry
- FRANCIS B. KINGSBURY, Ph.D., Assistant Professor of Physiological Chemistry
- WILLIAM H. KIRCHNER, B.S., Professor of Drawing and Descriptive Geometry
- MAY S. KISSOCK, B.A., Assistant Professor of Physical Education for Women
- RAY R. KNIGHT, B.A., M.D., Associate Professor of Roentgenology
- WINFORD P. LARSON, M.D., Professor of Bacteriology
- WILLIAM F. LASBY, B.A., D.D.S., Professor of Prosthetic Dentistry and Orthodontia
- HARRY C. LAWTON, D.D.S., Associate Professor of Prosthetic Dentistry, Orthodontia, and Dental Metallurgy
- THOMAS G. LEE, B.S., M.D., Professor of Comparative Anatomy
- HAROLD J. LEONARD, B.S., D.D.S., Assistant Professor in Oral Surgery
- JOSEPH M. LITTLE, D.D.S., Assistant Professor of Operative Dentistry
- ELMER J. LUND, Ph.D., Assistant Professor of Zoology
- ELIAS P. LYON, Ph.D., M.D., Professor of Physiology
- JESSE F. MCCLENDON, Ph.D., Associate Professor of Physiology
- FRANK H. MACDOUGALL, Ph.D., Associate Professor of Chemistry
- HERMANN A. MAVES, D.D.S., Professor of Oral Surgery
- RICHARD S. MAYBURY, D.D.S., Assistant Professor of Operative Dentistry
- WILLIAM C. NÄGELI, D.D.S., Assistant Professor of Operative Dentistry
- HENRY F. NACHTRIEB, B.S., Professor of Animal Biology
- HERBERT C. NELSON, D.D.S., Assistant Professor of Crown and Bridge Work
- ALLEN T. NEWMAN, Captain, U.S.A., Assistant Professor of Military Science and Tactics
- J. ANNA NORRIS, M.D., Associate Professor of Physical Education for Women
- ERNEST A. NUOFFER, Second Lieutenant, U.S.A., Assistant Professor of Military Science and Tactics
- FORREST H. ORTON, D.D.S., Professor of Crown and Bridge Work and Head of the Department
- CARL OTTO, D.D.S., Assistant Professor of Crown and Bridge Work
- ALFRED A. PAGENKOPF, D.D.S., Associate Professor of Crown and Bridge Work
- MARK O. PATTRIDGE, D.D.S., Associate Professor in Operative Dentistry
- CARL H. PETRI, D.D.S., Assistant Professor in Operative Dentistry and Oral Anatomy

- CHAUNCEY J. V. PETTIBONE, Ph.D., Assistant Professor of Physiologic Chemistry
- ANDREW T. RASMUSSEN, Ph.D., Assistant Professor of Anatomy
- GEORGE W. REYNOLDS, D.D.S., Associate Professor of Crown and Bridge Work
- HAROLD E. ROBERTSON, B.A., M.D., Professor of Pathology
- WILLIAM A. ROLL, D.D.S., Assistant Professor of Crown and Bridge Work
- CHARLES E. RUDOLPH, D.D.S., Assistant Professor of Prosthetic Dentistry and Oral Anatomy
- RICHARD E. SCAMMON, Ph.D., Professor of Anatomy
- FREDERICK H. SCOTT, Ph.D., M.B., D.Sc., Professor of Physiology
- JOSEPH E. SHELLMAN, D.D.S., Associate Professor of Operative Dentistry
- CHARLES P. SIGERFOOS, Ph.D., Professor of Animal Biology
- JOSEPH M. THOMAS, Ph.D., Professor of Rhetoric
- JAMES M. WALLS, D.M.D., Professor of Operative Dentistry and Head of the Department
- OSCAR A. WEISS, D.M.D., Professor of Prosthetic Dentistry and Orthodontia and Head of the Department
- AMOS S. WELLS, B.A., D.D.S., Professor of Crown and Bridge Work
- FRANK C. WHITMORE, Ph.D., Assistant Professor of Chemistry
- CHARLES A. WIETHOFF, D.D.S., Associate Professor of Oral Surgery
- M. RUSSEL WILCOX, M.D., Assistant Professor of Physiology
- GEORGE D. ALLEN, M.S., Instructor in Animal Biology
- ANNE BENTON, M.A., Instructor in Pathology and Bacteriology
- JOHN J. BOWENS, Sergeant, U.S.A., Instructor in Military Science and Tactics
- ARCHIBALD B. BUTTER, D.D.S., Instructor in Operative Dentistry
- FRANK CRAIN, Sergeant, U.S.A., Instructor in Military Science and Tactics
- RUDOLPH W. DELTON, D.D.S., Instructor in Prosthetic Dentistry and Orthodontia
- GEORGE D. ESTES, D.D.S., Instructor in Operative Dentistry
- ELDEN R. FOSSEY, Sergeant, U.S.A., Instructor in Military Science and Tactics
- CHARLES C. GAULT, B.A., Instructor in Physiology
- ESTHER GREISHEIMER, B.S., Instructor in Physiology
- LEE A. HARKER, D.D.S., Instructor in Prosthetic Dentistry and Oral Anatomy
- JOSEPH HAVLICEK, Sergeant, U.S.A., Instructor in Military Science and Tactics
- CLARENCE HERMANN, D.D.S., Instructor in Oral Surgery
- FRANCIS A. HOBART, Instructor in Mechanical Engineering
- HOUGHTON HOLLIDAY, B.A., D.D.S., Instructor in Theory and Practice and Superintendent of the Infirmary
- AUGUST H. F. HOMME, D.D.S., Instructor in Crown and Bridge Work

RAYMOND E. JOHNSON, D.D.S., Instructor in Oral Surgery
WILLIAM C. JOHNSON, B.A., M.D., Instructor in Pathology
HERBERT KETTLE, Sergeant, U.S.A., Instructor in Military Science and
Tactics

INGVALD KVITRUD, Instructor in Drawing
VALERIA LADD, B.A., Instructor in Physical Education for Women
MAURICE B. LAGAARD, Instructor in Drawing
EVERETT E. MACGIBBON, D.D.S., Instructor in Crown and Bridge Work
HANS B. NESS, D.D.S., Instructor in Prosthetic Dentistry
GUSTAVE J. NOBACK, B.S., Instructor in Anatomy
VICTOR T. NYLANDER, D.D.S., Instructor in Operative Dentistry
WILLIAM G. PALMS, Sergeant, U.S.A., Instructor in Military Science and
Tactics

PAUL S. PARKER, D.D.S., Instructor in Operative Dentistry
EDWARD QUIGLEY, Instructor in Forge Work
WILLIAM H. RICHARDS, Instructor in Mechanical Engineering
ADOLPH RINGOEN, Ph.D., Instructor in Animal Biology
CARL L. SCHUMAN, Ph.D., Instructor in Chemistry
LOUIS W. THOM, D.D.S., Instructor in Operative Dentistry
ALICE J. H. TOLG, M.D., Instructor in Physical Education for Women
WILLIAM D. VEHE, D.D.S., Special Instructor in Porcelain Work
MARGARET WARWICK, B.S., M.D., Instructor in Pathology
GUY H. WOOLLETT, Ph.D., Instructor in Chemistry
ANDREW J. WEISS, Instructor in Prosthetic Dentistry
LEHMAN WENDELL, D.D.S., Instructor in Theory and Practice
DANIEL E. ZISKIN, D.D.S., Instructor in Oral Surgery
HELEN A. MACKEEN, B.S., M.A., Teaching Fellow in Anatomy
FRANK L. ROBERTS, B.A., M.D., Teaching Fellow in Anatomy
CHARLES K. ROYS, M.A., M.D., Teaching Fellow in Anatomy

GENERAL INFORMATION

CURRICULUM

The course in the College of Dentistry leads to the degree of Doctor of Dental Surgery and covers a period of four or five years' collegiate study.

For statements of entrance requirements, registration, and fees, see Bulletin of General Information.

For schedule of lectures, announcements, changes in college rules, etc., see bulletin board. The rules for the guidance of students are printed in a separate booklet; in this will also be found a list of the required instruments.

COMBINED COURSES

Courses will be given in the College of Science, Literature, and Arts and the College of Dentistry leading to the degree of Bachelor of Arts or Bachelor of Science and Doctor of Dental Surgery.

GRADUATE WORK IN DENTISTRY

Graduates of dental schools who have received their Baccalaureate degree from this or any other approved university may become candidates for the degree of Master of Arts, Master of Science, or Doctor of Philosophy in the Graduate School. They will pursue courses of study conforming to the regulations of the Graduate School.

FELLOWSHIP

The Mayo Foundation offers a Fellowship in Dentistry similar to fellowship in any other specialty on the Foundation.

SUMMER QUARTER

A summer session of six or twelve weeks is offered in the Departments of Anatomy, Animal Biology, Bacteriology, Chemistry, Crown and Bridge Work, Oral Anatomy, Oral Surgery, Operative Dentistry, Orthodontia, Physiology, and Prosthetic Dentistry.

EXTENSION WORK

The College of Dentistry, with the coöperation of the General Extension Division, offers intensive lecture and clinical work.

These courses are prepared to give as complete a working knowledge of the subjects to the practicing dentists as the time will permit.

CONTINUATION COURSES

Departments offer teaching facilities and laboratories to any who wish to continue their study beyond the time allotted.

STUDY COURSES FOR DENTISTS

During the year the College of Dentistry will continue to offer graduate dentists the opportunity to register and take any course of lectures or clinical practice offered in the college laboratories and infirmary.

ADMISSION

General Requirements

1. English, three units.
2. Chemistry, one unit.
3. Mathematics: elementary algebra, one unit; plane geometry, one unit.
4. Enough additional work to make in all fifteen units of which not more than four may be in Group F.
5. Manual training recommended.

On account of the limited capacity of the College of Dentistry, not more than ninety freshmen can be admitted. Applications for admission should be in the Registrar's office not later than July 25.

Candidates will be selected according to quantity and quality of preparation, and when necessary their fitness shall be determined by an examination and conference with the Students' Work Committee.

All other qualifications being equal, residents of Minnesota will be given prior consideration for vacancies existing at the date of their application.

All freshmen students, entering the College of Dentistry must confer with the Dean of the College some time before their matriculation or immediately after.

FOUR-YEAR COURSE

Dental Expenses

| | |
|--------------------------------|----------|
| Freshman year | |
| Tuition fee per quarter | \$ 33.00 |
| Instruments for the year | 125.00 |
| Books | 25.00 |
| Sophomore year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments for the year | 125.00 |
| Books | 35.00 |
| Junior year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments for the year | 100.00 |
| Books | 25.00 |
| Senior year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments for the year | 25.00 |
| Books | 10.00 |

FIVE-YEAR COURSE

Dental Expenses

| | |
|-------------------------------|----------|
| Pre-Dental year | |
| Tuition fee per quarter | \$ 15.00 |
| Books | 10.00 |

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|-------------------------------|----------|
| Freshman year | |
| Tuition fee per quarter | \$ 33.00 |
| Instruments | 25.00 |
| Books | 25.00 |
| Sophomore year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments | 200.00 |
| Books | 35.00 |
| Junior year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments | 100.00 |
| Books | 25.00 |
| Senior year | |
| Tuition fee per quarter | \$ 60.00 |
| Instruments | 25.00 |
| Books | 10.00 |

MILITARY DRILL

Military Drill will be required of all men during the first two years of attendance.

PHYSICAL EDUCATION

A course is offered in Physical Education for Men and Women.

RULES AND REGULATIONS

Examinations, Standings, and Conditions

No student with an entrance condition will be allowed to register for any second-year subject, nor will any student with any first-year condition or failure be allowed to register for a third-year subject.

No student will be allowed to omit any freshman work in order to make up entrance conditions, except by special permission of the department affected.

Students will not be permitted to substitute private work in any branch for the regular college courses.

Final examination in every required subject is held at the close of the work at the end of the quarter, according to the extent of the course given. The examinations at the end of the quarter are only for those who are taking the courses, while the condition examinations are only for those who are attempting to remove conditions.

The final standing of any student in a given subject shall be determined as the result of (a) practical work (laboratory or clinical), (b) recitations, and (c) oral or (d) written examinations. All of these factors shall be taken into consideration in making up the final grading in any subject.

All standings shall be reported officially to and from the Registrar's office at the end of each quarter.

A uniform marking system has been adopted for the whole University. Four passing grades, indicated by the symbols *A*, *B*, *C*, and *D*, represent

differing degrees of merit. The symbol *E* represents a condition, which may be removed by examination and by such supplementary work as the department imposing it may require. *F* stands for a failure and calls for a repetition of the work in course. *I* stands for incomplete and grants the student further time for the completion of the required work. The percentage range value of each letter is as follows: A, 100 to 93; B, 92 to 87; C, 86 to 81; D, 80 to 75; E, 74 to 60; F, below 60.

Regular examinations for the removal of conditions shall be given at no other time than (1) the week following the Easter recess and (2) the registration week in September.

Students having conditions will be subject to the action of the Students' Work Committee.

A condition not removed at the first opportunity becomes a failure subject to the rules governing failures.

Failures necessitate the taking of the work again in class.

A student carrying less than the complete schedule of work may pay fees on a clock-hour basis.

Students who carry *failures* into a succeeding year may find a resultant conflict of study hours; in that event they will give preference to the unfinished studies of the lower conflicting course.

A student who has incomplete course conditions or failures in sixty per cent of his course for any semester shall be dropped.

A student may not be promoted if he has incomplete conditions or failures in more than twenty per cent of the course of any year.

A student who fails to remove a condition or failure within twelve months from the time it was incurred shall automatically be dropped from the school.

An incomplete course is one that has not been completed because of illness or other personal emergency.

Work limited.—Students pursuing any continuous subject who have done such poor work in the first semester as to receive a condition or failure in such subject, shall not be allowed to elect another subject in place of that in which the condition or failure was received, but shall be required to devote their full time to the remaining subjects of the course.

Exception to this rule shall be made only by the Committee on Students' Work after full investigation.

Additional work.—A student may elect a subject in another department or college if his standing in the regular course is satisfactory and on approval of the Students' Work Committee.

Attendance and Discipline

All lectures, laboratory, and infirmary courses and clinics must be taken in full and must invariably be entered upon during the week in which they begin.

All students are required to provide themselves with instruments, books, tools, and materials as prescribed by the College.

Tardiness and absences are only excusable on account of sickness.

No student whose absences in any semester exceed four weeks in the aggregate shall be admitted to final examination without special permission of the Students' Work Committee.

Any student's registration may be refused or cancelled by the Registrar at the request of the Students' Work Committee on account of absences, indifference to study, poor scholarship, disorderly or immoral conduct, and for dishonesty in classroom or laboratory work.

The practice of dentistry by students, except under the direct supervision of a preceptor, is prohibited by law in the State of Minnesota. Students violating this law will be suspended or expelled.

Except in cases of required work students are not allowed to obligate themselves in the Military Department, band, or other college activities, without permission from the Faculty.

Eligibility Regulations

No student shall take part in any public performance of a dramatic or musical club, or be eligible to election or appointment to official positions upon the boards of student publications, or take part in intercollegiate debates or oratorical contests, unless he has a clear record at the time.

ADVANCED STANDING

Applicants for advanced standing must present satisfactory evidence of possessing the preliminary educational qualifications required of the class they desire to enter.

They must also satisfy the professors of the branches from which they wish to be exempt, that the work pursued by them in other institutions was equal in scope and amount to that passed by the class they propose to enter.

No credits are accepted unconditionally, the Faculty reserving the privilege of examining any applicant when deemed necessary.

All certificates pertaining to advanced standing must be presented to the Dean, who will send them to the respective professors for acceptance or report of further requirements for acceptance.

REQUIREMENTS FOR GRADUATION

A candidate for the degree of Doctor of Dental Surgery must be twenty-one years of age, of good moral character, and, after having satisfied all the requirements for admission to the College, must have complied with all the rules and regulations of the College and obtained regular credit for all subjects of the entire course.

COURSES OF STUDY

FOUR-YEAR COURSE

Freshmen

| | Total Hours |
|------------------------------------|----------------|
| Anatomy, Oral | 72 |
| Animal Biology | 240 |
| Chemistry, General | 192 |
| Chemistry, Qualitative | 96 |
| English | 108 |
| Hygiene | ... |
| Military Science and Tactics | ... |
| Prosthetic Dentistry | 228 |
| Technical Drawing | 144 |
| | <hr/> |
| | 1,080 |

Sophomore

| | |
|--|------------|
| Anatomy, Gross | 336 |
| Anatomy, Histology and Embryology | 120 |
| Anatomy, Oral | 108 |
| Military Science and Tactics | ... |
| Operative Technique | 144 |
| Physiology and Physiological Chemistry | 168 |
| Prosthetic Dentistry | 216 |
| <i>Organic Chemistry</i> | <i>108</i> |
| | <hr/> |
| | 1,200 |

Junior

| | |
|--------------------------------------|-------|
| Bacteriology, General and Oral | 96 |
| Crown and Bridge Technique | 288 |
| Clinical Practice | 612 |
| Hygiene, General and Oral | 24 |
| Metallurgy, Applied | 24 |
| Operative Dentistry | 24 |
| Orthodontia Technique | 108 |
| Pathology, General | 96 |
| Pathology, Oral | 48 |
| Pharmacology and Therapeutics | 48 |
| Prosthetics | 36 |
| | <hr/> |
| | 1,404 |

Senior

| | |
|--|-------|
| Clinical Practice | 1,192 |
| Crown and Bridge Work | 36 |
| Elective | ... |
| Operative Dentistry | 36 |
| Orthodontia | 36 |
| Surgery, Oral | 72 |
| Theory and Practice of Dentistry | 36 |
| | <hr/> |
| | 1,404 |

FIVE-YEAR COURSE

Optional 1919 and 1920; required 1921

Pre-Dental Year

| | Total Hours |
|---|----------------|
| Biology | 240 |
| English, Rhetoric and Survey..... | 175 |
| Physics, with or without Mathematics..... | 216 |
| Elective, to make approximately..... | 150 |
| Mathematics, Language or Shop Practice..... | 72 |

781

Freshman Year

| | |
|-------------------------------------|-----|
| Anatomy | 336 |
| Chemistry, General, 2 quarters..... | 192 |
| Chemistry, Qualitative | 96 |
| Drawing, Technical | 144 |
| Prosthesis | 228 |
| Oral Anatomy | 72 |

1,068

Sophomore Year

| | |
|--|-----|
| Anatomy, Histology and Embryology..... | 144 |
| Anatomy, Oral | 108 |
| Bacteriology | 96 |
| Chemistry, Quantitative Analysis..... | 132 |
| Chemistry, Organic, 2 quarters..... | 216 |
| Metallurgy, applied | 24 |
| Operative Dental Technique..... | 144 |
| Prosthetic Dentistry | 216 |

1,090

Junior Year

| | |
|---------------------------------|-------|
| Clinical Practice | 600 |
| Crown and Bridge Technique..... | 288 |
| Hygiene | 24 |
| Operative Dentistry | 24 |
| Orthodontia Technique | 108 |
| Pathology, General | 96 |
| Pathology, Special | |
| Pharmacology | 48 |
| Physiology | 120 |
| Physiological Chemistry | 60 |
| Prosthesis | 36 |

1,404

Senior Year

| | |
|---|-------|
| Clinical Practice | 1,140 |
| Crown and Bridge Work Lecture and Recitation..... | 36 |
| Operative Dentistry | 36 |
| Orthodontia | 36 |
| Pathology, Oral | 48 |
| Surgery, Oral, etc..... | 72 |
| Theory and Practice..... | 36 |

1,404

DEPARTMENTAL STATEMENTS

ANATOMY

Professors CLARENCE M. JACKSON, THOMAS G. LEE; Associate Professor CHARLES A. ERDMANN; Assistant Professor ANDREW T. RASMUSSEN; Instructor GUSTAVE J. NOBACK; Teaching Fellows HELEN MACKEEN, FRANK L. ROBERTS, CHARLES K. ROYS.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|------------|-------------------------------|-----------------|------------|-----------------|
| 9f-10w-11s | Gross Anatomy..... | 15 | Fr. | An. Biol. |
| 14s,su | Histology and Embryology..... | 6 | Fr., soph. | An. Biol. |

9f-10w-11s. GROSS HUMAN ANATOMY. Dissection, including osteology. A disarticulated skeleton loaned to every two students. Every student required to dissect lateral half of the body. 336 hours. ERDMANN, RASMUSSEN, and Assistants.

14s,su. HISTOLOGY AND EMBRYOLOGY. Minute structure and development of the tissues and organs, with special emphasis upon the teeth and the digestive tract. Second-year dental students. 120 hours. JACKSON, LEE, and Assistants.

ANATOMY—ORAL

Professor GEORGE M. DAMON; Assistant Professors OSCAR COOPERMAN, CARL H. PETRI, CHARLES E. RUDOLPH; Instructor LEE A. HARKER.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|-------------------|-----------------|------------|-----------------|
| 1s | Oral Anatomy..... | 3 | Fr., soph. | 1 |
| 2f | Oral Anatomy..... | 3 | Soph. | 2 |

1s. ORAL ANATOMY. A course of lectures and recitations on the anatomy and nomenclature of the teeth, and such laboratory work as drawing, dissection, modeling, and carving of the teeth. 32 lecture hours; 40 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER.

2f. ORAL ANATOMY. Continuation of Course 2 as outlined above. 32 lecture hours; 76 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER.

ANIMAL BIOLOGY

Professors HENRY FRANCIS NACHTRIEB, CHARLES P. SIGERFOOS; Assistant Professor ELMER J. LUND; Instructors GEORGE DELVIN ALLEN, ADOLPH RINGOEN.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-------|----------------------|-----------------|------------|-----------------|
| 1f-2w | General Zoology..... | 5 | All | None |

1f-2w. GENERAL ZOOLOGY. A survey of the animal kingdom, emphasizing the principles of structure, physiology, embryology, classification, and evolution of animals. 64 lecture hours; 176 laboratory hours. Text-book, lectures, and quizzes. SIGERFOOS, LUND, ALLEN, RINGOEN.

CHEMISTRY

Professor LAUDER W. JONES; Associate Professor WILLIAM H. HUNTER; Assistant Professors LILLIAN COHEN, FRANK C. WHITMORE,; Instructor GUY H. WOOLLETT.

COURSES

Division of General and Inorganic Chemistry

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-------|------------------------------|-----------------|-----------------|-----------------|
| 4f-5w | General Inorganic Chem..... | 4 | Fr., soph., jr. | H. S. Chem. |
| 11s | Qualitative Analysis..... | 4 | Soph., jr., sr. | 1-2-3 or 4-5 |
| 30s | Elementary Organic Chem..... | 4 | Soph. | 1-2-3 or 4-5 |

4f-5w. GENERAL INORGANIC CHEMISTRY. Designed for those who have had one year high-school chemistry. A study of the general laws of chemistry and of the non-metals and their compounds. More intensive than Courses 1 and 2. 5—A study of the metals and their compounds. 192 hours. Continuation of Course 4. COHEN.

11s. QUALITATIVE CHEMICAL ANALYSIS. Laboratory work in systematic qualitative analysis with lectures on solution, ionization, chemical and physical equilibrium, oxidation and reduction, and other subjects pertinent to qualitative analysis. For students who satisfy the requirements of general chemistry. 96 hours. —————.

11-12w. QUANTITATIVE ANALYSIS. Includes a general discussion of the quantitative methods with laboratory work, 132 hours. WHITMORE.

30s. ELEMENTARY ORGANIC CHEMISTRY. An abbreviated course in the chemistry of carbon compounds. The laboratory work will include the preparation of a limited number of compounds. 96 hours. HUNTER, WOOLLETT, and Assistants.

CROWN AND BRIDGE WORK

Professors FORREST H. ORTON, AMOS S. WELLS; Associate Professors PETER J. BREKHUS, ALFRED A. PAGENKOPF, GEORGE W. REYNOLDS; Assistant Professors HERBERT C. NELSON, CARL OTTO, WILLIAM A. ROLL; Instructors AUGUST F. HOMME, EVERETT E. MACGIBBON, WILLIAM D. VEHE.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|----------|---------------------------------|-----------------|------------|-----------------|
| 1f-2w | Crown and Bridge Technique..... | 3 | Jr. | Dent. Anat. 3 |
| 4f-5w-6s | Crown and Bridge Practice..... | 2 | Sr. | 1-2 |

1f-2w. CROWN AND BRIDGE TECHNIQUE. A course of lectures, demonstrations, and laboratory work that includes all the more important forms of crowns and bridges. 12 lecture hours; 276 laboratory hours, and clinical practice. WELLS, PAGENKOPF, REYNOLDS, NELSON, OTTO, MACGIBBON.

4f-5w-6s. CROWN AND BRIDGE PRACTICE. A course of lectures and clinical practice covering the entire field of crown and bridge work, including porcelain crown work. 32 lecture hours and clinical practice. ORTON, BREKHUS, ROLL, VEHE.

DENTAL METALLURGY

Professor ALFRED OWRE; Associate Professor HARRY C. LAWTON.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|------------------------|-----------------|------------|-----------------|
| 1w | Dental Metallurgy..... | 1 | Jr. | Chem. 21-22 |

1w. DENTAL METALLURGY. Lectures, recitations, and demonstrations, taking up the most important metals with special reference to those used in dentistry. 24 hours. OWRE, LAWTON.

DRAWING AND DESCRIPTIVE GEOMETRY

Professor WILLIAM H. KIRCHNER; Instructors INGVALD KVITRUD, MAURICE B. LAGAARD.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|---------|------------------------|-----------------|------------|-----------------|
| 41f-42w | Technical Drawing..... | 2 | All | None |

41f-42w. TECHNICAL DRAWING. Reading and making of drawings. Projection, sketching, lettering, conventions, renderings, and translations. Preparation of conventional charts and diagrams of particular interest to dentists; also construction drawings of tools, instruments, and apparatus. 144 laboratory hours. KIRCHNER, KVITRUD, LAGAARD.

MILITARY SCIENCE AND TACTICS

Professor FRANK H. BURTON, Colonel, U. S. A.; Assistant Professors JERE BAXTER, Major, U. S. A., ARTHUR E. CLARK, ALLEN T. NEWMAN, Captains, U. S. A., HENRY C. BERTELSEN, ERNEST A. NUOFFER, Lieutenants, U. S. A.; Instructors JOHN J. BOWENS, FRANK CRAIN, ELDEN

R. FOSSEY, JOSEPH HAVLICEK, HERBERT KETTLE, WILLIAM G. PALMS,
Sergeants, U. S. A.

REQUIRED WORK

All physically fit male students are required to take military training during their first two years in school. This course is a prerequisite for graduation from the University.

All students, registered for military training, of any class are members of the Reserve Officers' Training Corps, and as such are issued all necessary uniform clothing and equipment by the Government free of charge.

After completing the two years required students may discontinue military work if they wish.

ELECTIVE WORK

Students who have completed the two years of required military work, and are selected for advanced work by the Professor of Military Science and Tactics, and who sign an agreement with the Government, to continue the work for their remaining course in college but not to exceed two years, are eligible for the advanced course in military training, which is prescribed in General Orders 49, W. D. 1916, and requires five hours per week—three practical and two theoretical. Three credits for each quarter are allowed for this work.

All advanced course students should take a course in International Law, Military Law, and Military History. These courses are given by the Department of Political Science and History and are arranged especially for the Military Department.

All members of the advanced course receive their uniforms, equipment, and commutation for subsistence at the rate of forty cents per day during the school year.

All students who complete the advanced course in the Military Department and who graduate from the University, will, if recommended by the Professor of Military Science and Tactics and the President of the University, be commissioned by the President of the United States, in the Officers' Reserve Corps.

OPERATIVE DENTISTRY

Professors JAMES M. WALLS, HENRY S. GODFREY; Associate Professors ROBERT O. GREEN, MARK O. PATTRIDGE, JOSEPH F. SHELLMAN; Assistant Professors NORMAN J. COX, JOSEPH M. LITTLE, RICHARD S. MAYBURY, WILLIAM C. NAEGELI; Instructors ARCHIBALD B. BUTTER, GEORGE D. ESTES, VICTOR T. NYLANDER, PAUL S. PARKER, LOUIS W. THOM, WILLIAM D. VEHE.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|----------|--------------------------|-----------------|------------|-----------------|
| 3s | Operative Technique..... | 2 | Soph. | Dent. Anat. 3 |
| 4f-5w-6s | Operative Dentistry..... | 2 | Jr. | 2 |
| 7f-8w-9s | Operative Dentistry..... | 3 | Sr. | 3-4 |

3s. OPERATIVE TECHNIQUE. This course consists of lectures, recitations, demonstrations, and laboratory work of a technical nature. 16 lecture hours; 128 laboratory hours. GREEN, PARKER, RAMAKER, and Assistants.

4f-5w-6s. OPERATIVE DENTISTRY. This course consists of lectures, recitations, and clinical practice. 32 lecture hours and clinical practice. WALLS, GREEN, SHELLMAN, LITTLE, MAYBURY, NAEGELI, NYLANDER, PARKER, RAMAKER.

7f-8w-9s. OPERATIVE DENTISTRY. A course of lectures, recitations, demonstrations, conference work, collateral reading, and clinical work covering the entire field of operative dentistry, including porcelain operations. 16 lecture hours and clinical practice. WALLS, GODFREY, PATTRIDGE, SHELLMAN, COX, LITTLE, MAYBURY, NAEGELI, VEHE.

ORAL SURGERY, PATHOLOGY, HYGIENE, ROENTGENOLOGY, AND DIAGNOSIS

Professors THOMAS B. HARTZELL, CHARLES A. GRIFFITH, HERMANN A. MAVES; Associate Professors CHARLES A. ERDMANN, RAY R. KNIGHT, CHARLES A. WIETHOFF; Assistant Professors WILLIAM A. GREY, HAROLD J. LEONARD; Instructors CLARENCE HERMANN, RAYMOND E. JOHNSON, DANIEL ZISKIN.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|----------|-------------------------------|-----------------|------------|--------------------------------------|
| 1f | Oral Hygiene..... | 2 | Jr. | None |
| 2w-3s | Oral Pathology..... | 2 | Sr. | Path. and Bact. |
| 4f-5w-6s | Oral Surgery..... | 3 | Sr. | Anat., Path., Bact., and Course 1 |
| | { Principles of Surgery..... | 2 | | |
| | { Surgical Anatomy..... | 2 | | |
| | { Oral Surgical Operations... | 2 | | |
| | { Clinical Practice..... | 3 | | |

1f. ORAL HYGIENE. A course of lectures and recitations on the hygiene of the mouth, practice in the technique of prophylaxis, treatment of gingivitis, examination, and diagnosis. 24 lecture hours and clinical practice. MAVES, LEONARD, HERMANN, JOHNSON.

2w-3s. ORAL PATHOLOGY. Lectures and recitations involving general pathology as a foundation for special pathology of the teeth, peridental structures, and oral cavity, and including metastatic infections and neurological disturbances due to infections and irritations in the mouth. 48 lecture hours. LEONARD.

4f-5w-6s. ORAL SURGERY. Four courses in principles of surgery; surgical anatomy; oral surgical operations and technique; practice in technique of extraction, oral roentgenology, hospital dental practice, pyorrhea

treatment, oral diagnosis, local and nitrous oxide anaesthesia, oral surgery proper. 72 lecture hours and clinical practice. HARTZELL, GRIFFITH, MAVES, ERDMANN, KNIGHT, WIETHOFF, GREY, LEONARD, HERMANN, HOLMGREN, JOHNSON, ZISKIN.

ORTHODONTIA

Professor OSCAR A. WEISS, WILLIAM F. LASBY; Associate Professors MAX E. ERNST, HARRY C. LAWTON; Assistant Professors BERT G. ANDERSON, CARL O. FLAGSTAD; Instructors RUDOLPH W. DELTON, LEHMAN WENDELL.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|----------|----------------------------|-----------------|------------|-----------------|
| 3s | Orthodontia Technique..... | 2 | Jr. | Pros. Tech. 4 |
| 4f-5w-6s | Orthodontia Practice..... | 4 | Sr. | 1 |

3s. ORTHODONTIA TECHNIQUE. A course of lectures, recitations, and laboratory work in the making of regulating appliances. 6 lecture hours. 102 laboratory hours. LAWTON, DELTON, WENDELL.

4f-5w-6s. ORTHODONTIA PRACTICE. A course of lectures and recitations upon theory and practice and clinical work. Every student is required to treat at least one case of irregularity of the teeth. 32 lecture hours, and clinical practice. WEISS, LASBY, ERNST, ANDERSON, FLAGSTAD, WENDELL.

BACTERIOLOGY AND IMMUNOLOGY

Professor WINFORD P. LARSON; Assistant Professor ARTHUR T. HENRICI; Instructor ANNE BENTON.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|-------------------|-----------------|------------|-----------------|
| 3f | Bacteriology..... | 4 | Jr. | Chem. 21-22 |

3f. BACTERIOLOGY. General principles of bacteriology, infection, and immunity. Technique of isolating and identifying pathogenic microorganisms. Study of microorganisms of the mouth with reference to dental diseases. 96 hours. HENRICI, et al.

PATHOLOGY AND PUBLIC HEALTH

Professor HAROLD E. ROBERTSON; Associate Professor ELEXIOUS T. BELL; Assistant Professor MOSES BARRON; Instructor MARGARET WARWICK.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|----------------|-----------------|------------|-----------------|
| 4w | Pathology..... | 4 | Jr. | Hist. 51 |

- 4w. **PATHOLOGY.** The study and recognition of gross and microscopic disease processes. The principles of general pathology with special consideration of diseases peculiar to the mouth and teeth and important in dental practice. 96 hours. HENRICI, WARWICK, and Assistants.

PHARMACOLOGY AND THERAPEUTICS

Professor ARTHUR D. HIRSCHFELDER.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|---------------------------|-----------------|------------|-----------------|
| 2s | General Pharmacology..... | 4 | Jr. | Chem. 21, 22 |

- 2s. **GENERAL PHARMACOLOGY AND THERAPEUTICS.** As applied to dentistry comprises a study of the properties, action, and therapeutic application of the principal drugs used in dentistry with exercises in prescription writing. 48 lecture hours. HIRSCHFELDER.

PHYSICAL EDUCATION

FOR MEN

Director LOUIS J. COOKE; Assistant Director WILLIAM K. FOSTER.

The purpose of the Department is to provide all men of the University opportunity for exercise in order to maintain and build up their general health. It also provides special training for the correction of physical defects and functional derangements.

A physical examination is required of all new matriculants, and of all others using the Department privileges, at the beginning of the year, and as often during their college course as their physical condition may indicate. Students taking the required work in Physical Education are examined also at the close of the year. A study of these records shows a marked improvement in the standard of health of the average student during his college course.

The gymnasium, swimming pool, and baths are open to all students of the University, who are free to use the apparatus and to pursue a course in physical training under the supervision of the Director and his assistants.

Those students taking the required course in Physical Education who can not swim, must make a reasonable effort, as determined by the Department, to pass the swimming and life-saving requirements, and will be assigned special hours for instruction.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-----------------------|---------|------------|-----------------|
| 1 | Personal Hygiene..... | 1 | All | None |

1. **PERSONAL HYGIENE.** Two hours per week; first six weeks of first semester. Examination at close of course. COOKE.

A special lecture on sex hygiene is given sometime during the first ten days of the autumn semester, with required attendance on the part of all freshmen.

PHYSICAL EDUCATION

FOR WOMEN

Associate Professor J. ANNA NORRIS; Assistant Professor MAY S. KISSOCK; Instructors VALERIA G. LADD, ALICE J. H. TOLG.

This Department aims to promote the health of the women students. It gives physical examination and advice to all on entrance; plans systematically to keep in close touch with them during their first year in college; conducts yearly consultations with, and examines when necessary, all upper-class students; gives courses in hygiene; organizes physical work to meet the varying needs and physical tastes of students; cooperates closely with the Woman's Athletic Association in encouraging and organizing athletic sports; holds regular office hours for the purpose of consultation with all students who desire its advice; and investigates cases of illness which come to its attention.

Work in this Department is required of all newly entering students (see Courses 1-2 and 11), of sophomores who can not pass the swimming examination, and of all students permitted, for reasons connected with their physical condition, to carry less than the minimum number of credit hours. Physical examinations or consultations required annually of all students.

Elective work without credit arranged in social dancing, gymnastic dancing, swimming, fencing, basket-ball, baseball, and other activities.

PHYSIOLOGY

Professors ELIAS P. LYON, FREDERICK H. SCOTT; Associate Professors RICHARD OLDING BEARD, JESSE F. MCCLENDON; Assistant Professors FRANCIS B. KINGSBURY, CHAUNCEY J. V. PETTIBONE, M. RUSSEL WILCOX; Instructors CHARLES C. GAULT, ESTHER GREISHEIMER.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|--------|-----------------------------|-----------------|------------|-----------------|
| 3s, su | Human Physiology | 5 | Soph. | An. Biol. |
| 6s, su | Physiologic Chemistry | 3 | Soph. | Chem. 37 |

3f,w,s,su. HUMAN PHYSIOLOGY. Science, Literature, and Arts, School for Nurses, Home Economics, Dental students and others. Prerequisites: elementary biology and chemistry. Lectures and laboratory. Repeated each quarter. 108 hours. LYON, BEARD, and Assistants.

6s,su. PHYSIOLOGIC CHEMISTRY. Dental students and others. Prerequisite: organic chemistry. 60 hours. PETTIBONE and Assistants.

PROSTHETIC DENTISTRY

Professors OSCAR A. WEISS, GEORGE M. DAMON, WILLIAM F. LASBY; Associate Professor HARRY C. LAWTON; Assistant Professors BERT C. ANDERSON, OSCAR COOPERMAN, CARL O. FLAGSTAD, CARL H. PETRI, CHARLES E. RUDOLPH; Instructors RUDOLPH W. DELTON, LEE A. HARKER, HANS B. NESS, ANDREW J. WEISS, LEHMAN WENDELL.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-------------|---------------------------|-----------------|------------|-----------------|
| 1f-2w-3s | Prosthetic Technique..... | 2 | Fr. | None |
| 4f-5w-6s | Prosthetic Technique..... | 2 | Soph. | 1-2 |
| 7f-8w-9s | Prosthetic Practice..... | 2 | Jr. | 3-4 |
| 10f-11w-12s | Prosthetic Practice..... | 1 | Sr. | 5-6 |

1f-2w-3s. PROSTHETIC TECHNIQUE. This course consists of lectures and technique work in the laboratory, comprising impression materials and their uses and the different processes of plate work. 32 lecture hours; 196 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER.

4f-5w. PROSTHETIC TECHNIQUE. The course consists of lectures, recitations, and laboratory work covering the principles and practice of metallic plate work. 12 lecture hours; 204 laboratory hours. LAWTON, DELTON, WENDELL.

7f-8w-9s. PROSTHETIC PRACTICE. A course of lectures and recitations upon theory and practice and clinical work in the simpler forms. 36 lecture hours and clinical practice. WEISS, LASBY, ANDERSON.

10f-11w-12s. PROSTHETIC PRACTICE. A course of clinical work in special prosthesis, as cleft palate and facial restoration. Clinical practice. WEISS, LASBY, ANDERSON, FLAGSTAD.

RHETORIC

Professor JOSEPH M. THOMAS; Assistant Professor CYRIL A. HERRICK.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|----------|-------------------------------|-----------------|------------|-----------------|
| 4f-5w-6s | Composition and Rhetoric..... | 3 | Fr. | None |

4f-5w-6s. COMPOSITION AND RHETORIC. Review of grammar; study of simple expository composition; theme writing; study and analysis of selected essays; reading and discussion of a selected list of masterpieces. 108 lecture hours. HERRICK.

THEORY AND PRACTICE OF DENTISTRY

Professor ALFRED OWRE; Associate Professor RAY R. KNIGHT; Instructors HOUGHTON HOLLIDAY, LEHMAN WENDELL.

COURSES

| No. | Title | Quarter credits | Offered to | Prereq. courses |
|-----|---------------------------------------|-----------------|------------|-----------------|
| 3s | Theory and Practice of Dentistry..... | 2 | Sr. | None |

- 3s. **THEORY AND PRACTICE OF DENTISTRY.** A lecture and conference course in the theory and practice of dentistry, applied economics, jurisprudence, psychology, ethics, and art. 32 lecture hours. OWRE and Associates.

For courses in Economics, Psychology, Physics, Shop Practice, Mathematics, History, and Languages, see Bulletins of the College of Science, Literature, and the Arts and College of Engineering and Architecture.

STUDENTS

SENIORS

A. F. Anderson
L. C. Anderson
H. W. Anderson
A. V. Aronson
C. W. Bierman
H. R. Brandt
K. E. Britzius
F. I. Brookes
E. R. Carpenter
J. H. Conway
M. E. Cook
T. L. Daly
F. V. Davidson
L. A. Daum
W. O. Dille
N. J. Dobson
H. I. Egdahl
V. D. Elliott
J. M. Foster
B. F. Fuller
J. S. Gletne

O. F. Hallum
R. K. Hawley
R. L. Hedberg
A. W. Johnson
R. P. Kline
L. C. Krause
F. A. Larson
M. M. Levy
J. K. Lynde
E. C. McGill
S. G. Mara
W. I. Medalie
J. G. Meisser
E. J. Mohn
S. L. Murphy
O. T. Olson
Ralph Payne
J. P. Pederson
David Pink
R. R. Reed
D. E. Rodman

O. A. Rose
H. D. Rostad
W. L. Sahr
R. T. Searing
F. L. Skocdopole
M. A. Sivinski
O. K. Stafford
R. B. Swenson
F. C. Thiers
A. L. Thomas
R. F. Thurston
R. A. Ulvestad
C. A. VanSlyke
I. S. Veblen
G. C. Weiser
H. C. Wild
W. T. Williams
H. D. Wolff
B. P. Wrbitzky
A. L. Wrucke

JUNIORS

N. T. Ahmann
E. L. Bergan
J. K. Blunt
B. K. Braum
J. W. Bryant
B. J. Brzenski
S. O. Bylund
W. R. Clymer
M. J. Cohen
W. P. Crolley
C. F. Donaldson
L. V. Downing
C. D. East
E. C. Fogarty
V. B. Francis
T. C. Glanz
M. W. Goldberg
M. G. Gordon
E. P. Grumstrup
W. H. Hagen
R. V. Hanson
A. A. Hass
F. M. Howe

R. G. Ioset
R. F. Ioset
R. A. Jacobson
F. S. James
A. F. Johnson
E. L. Johnson
M. K. Johnson (Miss)
R. M. Johnson
A. L. Katz
H. A. Kehne
G. B. Kellett
Daniel Kottke
Ben Lan
H. J. Landers
H. O. Larson
L. K. Lawler
M. E. Lawler
G. D. Long
E. C. Lundquist
V. A. Luttio
L. H. McCray
N. J. Marxen
A. H. Maze

A. J. Melby
C. D. Mitchell
M. C. Mohn
A. L. Nelson
D. L. Nelleremoe
L. T. Oster
A. G. Patterson
A. E. Prechel
M. W. Quigley
H. E. Ramsett
R. C. Rawson
P. A. Risk
C. H. Schwedes
J. F. Sprafka
E. C. Swanson
H. E. Swanson
A. T. Tomasek
P. S. Taylor
M. H. Thornton
W. J. VonBank
P. B. Wiberg
L. F. Will
L. E. Witter

SOPHOMORES

R. N. Albinson
B. C. Amundson
W. W. Baade
H. O. Bakke
F. V. Betlach
L. M. Billings
R. W. Browne
Samuel Bugenstein
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Dentistry

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1918-1919

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The Bulletin of the University of Minnesota

*The College of Dentistry
Announcement for the Year
1918 - 1919* ✓



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| 1918 | | | | | | | 1919 | | | | | | | | | | | | | |
|-----------|----|----|----|----|----|----|----------|----|----|----|----|----|----|-----------|----|----|----|----|----|----|
| JULY | | | | | | | JANUARY | | | | | | | JULY | | | | | | |
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| AUGUST | | | | | | | FEBRUARY | | | | | | | AUGUST | | | | | | |
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| DECEMBER | | | | | | | JUNE | | | | | | | DECEMBER | | | | | | |
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UNIVERSITY CALENDAR

1918-1919

1918

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|-----------|-------|-----------|--|
| September | 11 | Wednesday | Registration closes except for new students |
| September | 11-18 | Week | Fees payable except for new students |
| September | 17-24 | Week | Examinations for removal of conditions and entrance examinations |
| September | 23-24 | | Registration and payment of fees for new students |
| September | 25 | Wednesday | First semester begins |
| October | 17 | Thursday | Senate meeting, 4:00 p.m. |
| November | 5 | Tuesday | General Election Day; a holiday |
| November | 27 | Wednesday | Thanksgiving recess begins 9:00 p.m. |
| December | 2 | Monday | Thanksgiving recess ends 8:00 a.m. |
| December | 21 | Saturday | Christmas vacation begins 12 m. |

1919

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| January | 2 | Thursday | Christmas vacation ends 8:00 a.m. |
| January | 20 | Monday | Second semester registration closes except for new students |
| January | 27 | Monday | Final examinations begin |
| January | 27 | Monday | Payment of second semester fees closes except for new students |
| January | 31 | } | Registration and payment of fees for new students |
| February | 1 | | |
| February | 3 | Monday | Second semester begins |
| February | 12 | Wednesday | Lincoln's Birthday; a holiday |
| February | 20 | Thursday | Senate meeting, 4:00 p.m. |
| February | 22 | Saturday | Washington's Birthday; a holiday |
| April | 17 | Thursday | Easter recess begins 9:00 p.m. |
| April | 22 | Tuesday | Easter recess ends 8:00 a.m. |
| April | 22-28 | Week | Condition examinations in certain colleges |
| May | 15 | Thursday | Senate meeting, 4:00 p.m. |
| May | 23 | Friday | Final examinations begin 2:00 p.m. |
| May | 30 | Friday | Memorial Day; a holiday |
| May | 31 | Saturday | Second semester closes |
| June | 1 | Sunday | Baccalaureate service |
| June | 2 | Monday | Senior Class Day exercises |
| June | 4 | Wednesday | Alumni Day |
| June | 5 | Thursday | Forty-seventh Annual Commencement |
| June | 6 | Friday | Summer vacation begins |
| June | 16 | Monday | Summer Session begins |

The University year for 1919-20 will begin Tuesday, September 16.
Classes will begin September 24.

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GENERAL INFORMATION

CURRICULUM

The course in the College of Dentistry leads to the degree of Doctor of Dental Surgery and covers a period of four or five years' collegiate study.

For statements of entrance requirements, registration, and fees, see Bulletin of General Information.

For schedule of lectures, announcements, changes in college rules, etc., see bulletin board. The rules for the guidance of students are printed in a separate booklet; in this will also be found a list of the required instruments.

COMBINED COURSES

Courses will be given in the College of Science, Literature, and Arts and the College of Dentistry leading to the degree of Bachelor of Arts or Bachelor of Science and Doctor of Dental Surgery.

GRADUATE WORK IN DENTISTRY

Graduates of dental schools who have received their Baccalaureate degree from this or any other approved university may become candidates for the degree of Master of Arts, Master of Science, or Doctor of Philosophy in the Graduate School. They will pursue courses of study conforming to the regulations of the Graduate School.

FELLOWSHIP

The Mayo Foundation offers a Fellowship in Dentistry similar to fellowship in any other specialty on the Foundation.

SUMMER SESSION

A summer session of six or twelve weeks is offered in the Departments of Anatomy, Animal Biology, Bacteriology, Chemistry, Crown and Bridge Work, Oral Anatomy, Oral Surgery, Operative Dentistry, Orthodontia, Physiology, and Prosthetic Dentistry.

EXTENSION WORK

The College of Dentistry, with the coöperation of the General Extension Division, offers intensive lecture and clinical work.

The course is prepared to give as complete a working knowledge of the subjects to the practicing dentists as the time will permit.

CONTINUATION COURSES

Departments offer teaching facilities and laboratories to any who wish to continue their study beyond the time allotted.

COLLEGE OF DENTISTRY

STUDY COURSES FOR DENTISTS

During the year the College of Dentistry will continue to offer graduate dentists the opportunity to register and take any course of lectures or clinical practice offered in the college laboratories and infirmary.

ADMISSION

General Requirements

1. English, three units.
2. Chemistry, one unit.
3. Mathematics: Elementary Algebra, one unit; Plane Geometry, one unit.
4. Enough additional work to make in all fifteen units of which not more than four may be in Group F.
5. Manual Training recommended.

On account of the limited capacity of the College of Dentistry, not more than ninety freshmen can be admitted. Applications for admission should be in the Registrar's office not later than July 25.

Candidates will be selected according to quantity and quality of preparation, and when necessary their fitness shall be determined by an examination and conference with the Students' Work Committee.

All other qualifications being equal, residents of Minnesota will be given prior consideration for vacancies existing at the date of their application.

All freshmen students, entering the College of Dentistry must confer with the Dean of the College some time before their matriculation or immediately after.

FOUR-YEAR COURSE

Expenses

Freshman year

| | |
|--------------------------------|----------|
| Annual incidental fee..... | \$100.00 |
| Instruments | 125.00 |
| Books | 25.00 |
| *Military uniform for men..... | 18.00 |

Sophomore year

| | |
|----------------------------|----------|
| Annual incidental fee..... | \$175.00 |
| Instruments | 225.00 |
| Books | 35.00 |

Junior year

| | |
|----------------------------|----------|
| Annual incidental fee..... | \$175.00 |
| Instruments | 100.00 |
| Books | 25.00 |

Senior year

| | |
|----------------------------|----------|
| Annual incidental fee..... | \$175.00 |
| Instruments | 15.00 |
| Books | 10.00 |

* Subject to change due to cost of material.

FIVE-YEAR COURSE

Expenses

| | |
|--------------------------------|----------|
| Pre-Dental year | |
| Annual incidental fee..... | \$40.00 |
| Books | 10.00 |
| *Military uniform for men..... | 18.00 |
| Freshman year | |
| Annual incidental fee..... | \$40.00 |
| Instruments | 25.00 |
| Books | 25.00 |
| Sophomore year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 300.00 |
| Books | 35.00 |
| Junior year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 75.00 |
| Books | 25.00 |
| Senior year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 5.00 |
| Books | 10.00 |

MILITARY DRILL

Military Drill will be required of all men during the first two years of attendance.

PHYSICAL EDUCATION

A course is offered in Physical Education for Men and Women.

RULES AND REGULATIONS

Examinations, Standings, and Conditions

No student with an entrance condition will be allowed to register for any second-year subject, nor will any student with any first-year condition or failure be allowed to register for a third-year subject.

No student will be allowed to omit any freshman work in order to make up entrance conditions, except by special permission of the department affected.

Students will not be permitted to substitute private work in any branch for the regular college courses.

Final examination in every required subject is held at the close of the work at the end of the semester or quarter, according to the extent of the course given. The examinations at the end of semester or quarter are only for those who are taking the courses, while the condition examinations are only for those who are attempting to remove conditions.

* Subject to change due to cost of material.

The final standing of any student in a given subject shall be determined as the result of (a) practical work (laboratory or clinical), (b) recitations, and (c) oral or (d) written examinations. All of these factors shall be taken into consideration in making up the final grading in any subject.

All standings shall be reported officially to and from the Registrar's office at the end of each semester.

A uniform marking system has been adopted for the whole University. Four passing grades, indicated by the symbols *A*, *B*, *C*, and *D*, represent differing degrees of merit. The symbol *E* represents a condition, which may be removed by examination and by such supplementary work as the department imposing it may require. *F* stands for a failure and calls for a repetition of the work in course. *I* stands for incomplete and grants the student further time for the completion of the required work. The percentage range value of each letter is as follows: *A*, 100 to 93; *B*, 92 to 87; *C*, 86 to 81; *D*, 80 to 75; *E*, 74 to 60; *F*, below 60.

Regular examinations for the removal of conditions shall be given at no other time than (1) the week following the Easter recess and (2) the registration week in September.

Students having conditions will be subject to the action of the Students' Work Committee.

A condition not removed at the first opportunity becomes a failure subject to the rules governing failures.

Failures necessitate the taking of the work again in class.

A student carrying less than the complete schedule of work may pay fees on a clock-hour basis.

Students who carry *failures* into a succeeding year may find a resultant conflict of study hours; in that event they will give preference to the unfinished studies of the lower conflicting course.

A student who has incomplete course conditions or failures in sixty per cent of his course for any semester shall be dropped.

A student may not be promoted if he has incomplete conditions or failures in more than twenty per cent of the course of any year.

A student who fails to remove a condition or failure within twelve months from the time it was incurred shall automatically be dropped from the school.

An incomplete course is one that has not been completed because of illness or other personal emergency.

Work limited.—Students pursuing any continuous subject who have done such poor work in the first semester as to receive a condition or failure in such subject, shall not be allowed to elect another subject in place of that in which the condition or failure was received, but shall be required to devote their full time to the remaining subjects of the course.

Exception to this rule shall be made only by the Committee on Students' Work after full investigation.

Additional work.—A student may elect a subject in another department or college if his standing in the regular course is satisfactory and on approval of the Students' Work Committee.

Attendance and Discipline

All lectures, laboratory, and infirmary courses and clinics must be taken in full and must invariably be entered upon during the week in which they begin.

All students are required to provide themselves with instruments, books, tools, and materials as prescribed by the college.

Tardiness and absences are only excusable on account of sickness.

No student whose absences in any semester exceed four weeks in the aggregate shall be admitted to final examination without special permission of the Students' Work Committee.

Any student's registration may be refused or cancelled by the Registrar at the request of the Students' Work Committee on account of absences, indifference to study, poor scholarship, disorderly or immoral conduct, and for dishonesty in classroom or laboratory work.

The practice of dentistry by students, except under the direct supervision of a preceptor, is prohibited by law in the State of Minnesota. Students violating this law will be suspended or expelled.

Except in cases of required work students are not allowed to obligate themselves in the Military Department, band, or other college activities, without permission from the Faculty.

Eligibility Regulations

No student shall take part in any public performance of a dramatic or musical club, or be eligible to election or appointment to official positions upon the boards of student publications, or take part in intercollegiate debates or oratorical contests, unless he has a clear record at the time.

ADVANCED STANDING

Applicants for advanced standing must present satisfactory evidence of possessing the preliminary educational qualifications required of the class they desire to enter.

They must also satisfy the professors of the branches from which they wish to be exempt, that the work pursued by them in other institutions was equal in scope and amount to that passed by the class they propose to enter.

No credits are accepted unconditionally, the Faculty reserving the privilege of examining any applicant when deemed necessary.

All certificates pertaining to advanced standing must be presented to the Dean, who will send them to the respective professors for acceptance or report of further requirements for acceptance.

REQUIREMENTS FOR GRADUATION

A candidate for the degree of Doctor of Dental Surgery must be twenty-one years of age, of good moral character, and, after having satisfied all the requirements for admission to the College, must have complied with all the rules and regulations of the College and obtained regular credit for all subjects of the entire course.

COURSE OF STUDY, 1918-1919

FOUR-YEAR COURSE

| <i>Freshman Year</i> | First Semester | | Second Semester | |
|--|----------------|---------|-----------------|---------|
| | Credits | Hours | Credits | Hours |
| Anatomy, Oral | 1 | 16 | 2 | 64 |
| Animal Biology | 3 | 96 | 3 | 96 |
| Chemistry, Adv. Gen. and Qualitative.... | 3 | 96 | 3 | 96 |
| English, Rhetoric | 3 | 48 | 3 | 48 |
| Hygiene, Personal | 1 | 16 | | |
| Military Science and Tactics..... | | | | |
| Prosthetic Dentistry | 3 | 112 | 3 | 112 |
| Technical Drawing, Shop Practice, or Physics | 2-4 | 64-96 | 2-4 | 64-96 |
| | 16-18 | 448-480 | 16-18 | 480-512 |
| <i>Sophomore Year</i> | | | | |
| Anatomy, Gross | 7 | 208 | 4 | 118 |
| Anatomy, Histology and Embryology..... | 4 | 128 | | |
| Anatomy, Oral | 3 | 96 | | |
| Chemistry, Organic | 3 | 96 | | |
| Military Science and Tactics..... | | | | |
| Operative Dentistry | | | 4 | 160 |
| Physiology and Physiologic Chemistry.... | | | 7 | 192 |
| Prosthetic Dentistry | 1 | 48 | 3 | 144 |
| | 18 | 576 | 18 | 624 |
| <i>Junior Year</i> | | | | |
| Bacteriology, General and Oral..... | 4 | 128 | | |
| Crown and Bridge Work..... | 6 | 256 | 3 | 112 |
| Hygiene, General and Oral..... | 1 | 48 | 1 | 16 |
| Metallurgy, Applied | 1 | 16 | | |
| Operative Dentistry | 4 | 128 | 3 | 144 |
| Orthodontia | | | 2 | 96 |
| Pathology, General and Oral..... | | | 4 | 128 |
| Pharmacology and Therapeutics..... | | | 4 | 64 |
| Prosthetic Dentistry | 3 | 80 | 2 | 96 |
| | 19 | 656 | 19 | 656 |
| <i>Senior Year</i> | | | | |
| Crown and Bridge Work..... | 3 | 112 | 3 | 112 |
| *Elective | 1 | 16-48 | 1 | 16-48 |
| Operative Dentistry | 5 | 208 | 4 | 192 |
| Orthodontia | 2 | 64 | 2 | 64 |
| Pathology, Oral | 3 | 48 | | |
| Prosthetic Dentistry | 2 | 96 | 1 | 48 |
| Surgery, Oral | 3 | 80 | 6 | 160 |
| Theory and Practice of Dentistry and Conference Course | | | 2 | 32 |
| | 19 | 624-656 | 19 | 624-656 |

One credit hour may be either one recitation hour through one semester, two laboratory hours with outside work, or three laboratory hours without outside work.

* A student may elect a subject in another department if his standing in the regular course is satisfactory.

COURSE OF STUDY, 1918-1919

FIVE-YEAR COURSE

| | First Semester | | Second Semester | |
|--|----------------|---------|-----------------|---------|
| | Credits | Hours | Credits | Hours |
| <i>Pre-Dental Year</i> | | | | |
| Animal Biology | 3 | 96 | 3 | 96 |
| Chemistry, Adv. Gen. and Qualitative.... | 3 | 96 | 3 | 96 |
| English, Rhetoric | 3 | 48 | 3 | 48 |
| Hygiene, Personal | 1 | 16 | | |
| Mathematics, History, or Language..... | 3-5 | 48-80 | 3-5 | 48-80 |
| Military Science and Tactics..... | | | | |
| Technical Drawing or Shop Practice..... | 2 | 96 | 2 | 96 |
| | 15-17 | 400-432 | 14-16 | 384-416 |
| <i>Freshman Year</i> | | | | |
| Anatomy, Gross | 7 | 208 | 4 | 128 |
| Chemistry, Organic | 3 | 96 | 3 | 96 |
| Economics or Psychology..... | 3 | 48 | 3 | 48 |
| Military Science and Tactics..... | | | | |
| Physics (with or without Mathematics as prerequisite) | 4 | 64 | 4 | 64 |
| | 17 | 416 | 14 | 336 |
| <i>Sophomore Year</i> | | | | |
| Anatomy, Histology and Embryology..... | 4 | 128 | | |
| Anatomy, Oral | 6 | 176 | | |
| Operative Dentistry | | | 4 | 160 |
| Physiology and Physiologic Chemistry.... | | | 7 | 192 |
| Prosthetic Dentistry | 6 | 224 | 4 | 192 |
| | 16 | 528 | 15 | 544 |
| <i>Junior Year</i> | | | | |
| Bacteriology, General and Oral..... | 4 | 128 | | |
| Crown and Bridge Work..... | 6 | 256 | 3 | 112 |
| Hygiene, General and Oral..... | 1 | 48 | 1 | 16 |
| Metallurgy, Applied | 1 | 16 | | |
| Operative Dentistry | 4 | 128 | 3 | 144 |
| Orthodontia | | | 2 | 96 |
| Pathology, General and Oral..... | | | 4 | 128 |
| Pharmacology and Therapeutics..... | | | 4 | 64 |
| Prosthetic Dentistry | 3 | 80 | 2 | 96 |
| | 19 | 656 | 19 | 656 |
| <i>Senior Year</i> | | | | |
| Crown and Bridge Work..... | 3 | 112 | 3 | 112 |
| *Elective | 1 | 16-48 | 1 | 16-48 |
| Operative Dentistry | 5 | 208 | 4 | 192 |
| Orthodontia | 2 | 64 | 2 | 64 |
| Pathology, Oral | 3 | 48 | | |
| Prosthetic Dentistry | 2 | 96 | 1 | 48 |
| Surgery, Oral | 3 | 80 | 6 | 160 |
| Theory and Practice of Dentistry and Conference Course | | | 2 | 32 |
| | 19 | 624-656 | 19 | 624-656 |

One credit hour may be either one recitation hour through one semester, two laboratory hours with outside work, or three laboratory hours without outside work.

* A student may elect a subject in another department if his standing in the regular course is satisfactory.

DEPARTMENTAL STATEMENTS

Odd numbers indicate first-semester courses; even numbers, second-semester courses. A combination of the two (e.g., 5-6) indicates courses continuing through the year. In the case of courses repeated the second semester, the suffix *a* indicates first semester; the suffix *b*, second semester.

ANATOMY

Professors CLARENCE M. JACKSON, THOMAS G. LEE; Associate Professor CHARLES A. ERDMANN; Instructor CHESTER A. STEWART; Assistants ROBERT S. GUTSELL, HJALMAR L. OSTERUD, BYRON L. ROBINSON, FAUS P. SILVERNALE.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|--|-------------------------------|---------|------------|-----------------|
| 3-4. | Gross Anatomy | 11 | Fr. | An. Biol. |
| 7. | Histology and Embryology..... | 4 | Fr., soph. | An. Biol. |
| 3-4. GROSS HUMAN ANATOMY. Dissection, including osteology. A dissected skeleton loaned to any two students. Every student required to dissect lateral half of the body. Third-year medical and second-year dental students. lecture hours; laboratory hours. JACKSON, ERDMANN. | | | | |
| 7. HISTOLOGY AND EMBRYOLOGY. Minute structure and development of the tissues and organs. Second-year dental students. 128 hours. JACKSON, LEE, and Assistants. | | | | |

ANATOMY—ORAL

Associate Professor GEORGE M. DAMON; Assistant Professors OSCAR COOPERMAN, CARL H. PETRI, CHARLES E. RUDOLPH; Instructor LEE H. HARKER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|---|--------------------|---------|------------|-----------------|
| 1-2. | Oral Anatomy | 3 | Fr., soph. | 1 |
| 3. | Oral Anatomy | 3 | Soph. | 2 |
| 1-2. ORAL ANATOMY. A course of lectures and recitations on the anatomy and nomenclature of the teeth, and such laboratory work as drawing, dissection, modeling, and carving of the teeth. 32 lecture hours; 48 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER. | | | | |
| 3. ORAL ANATOMY. Continuation of Course 2 as outlined above. 32 lecture hours; 64 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER. | | | | |

ANIMAL BIOLOGY

Professors HENRY FRANCIS NACHTRIEB, CHARLES P. SIGERFOOS; Assistant Professor ELMER J. LUND; Instructor GEORGE DELVIN ALLEN.

COURSES

Introductory Course

| No. | Title | Credits | Offered to | Prereq. courses |
|------|-----------------------|---------|------------|-----------------|
| 1-2. | General Zoology | 6† | All | None |

INTRODUCTORY COURSE

- 1-2. GENERAL ZOOLOGY. A survey of the animal kingdom, emphasizing the principles of structure, physiology, embryology, classification, and evolution of animals. 64 lecture hours; 128 laboratory hours. Textbook, lectures, and quizzes. SIGERFOOS, LUND, ALLEN.

CHEMISTRY

Associate Professor WILLIAM H. HUNTER; Assistant Professor FRANK H. MACDOUGALL; Instructor CARL L. SCHUMAN.

COURSES

Division of General and Inorganic Chemistry

| No. | Title | Credits | Offered to | Prereq. courses |
|------|---------------------------------------|---------|-----------------|------------------------------|
| 3-4. | Adv. Gen. Chem. and Qualitative Anal. | 6† | Fr., soph., jr. | Entrance credit in Chemistry |
| 37. | Organic Chemistry | 3 | Soph. | 3-4 |

- 3-4. ADVANCED GENERAL CHEMISTRY AND QUALITATIVE ANALYSIS. Lectures and laboratory work. A discussion of the general chemical theories and laws, with qualitative analysis. 64 lecture hours; 128 laboratory hours. MACDOUGALL and Assistants.
37. ORGANIC CHEMISTRY. A course in the essentials of organic chemistry, with especial reference to compounds important in dentistry. Lectures, recitations, and laboratory work. 32 lecture hours; 64 laboratory hours. HUNTER, SCHUMAN, and Assistants.

CROWN AND BRIDGE WORK

Professor FORREST H. ORTON; Associate Professors PETER J. BREKHUS, ALFRED A. PAGENKOPF, GEORGE W. REYNOLDS, AMOS S. WELLS; Assistant Professors HERBERT C. NELSON, WILLIAM A. ROLL; Instructors EVERETT E. MACGIBBON,* CARL OTTO, WILLIAM D. VEHE.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|---------------------------------|---------|------------|-----------------|
| 1-2. | Crown and Bridge Technique..... | 9 | Jr. | Dent. Anat. 3 |
| 3-4. | Crown and Bridge Practice..... | 6 | Sr. | 1-2 |

† Both semesters must be completed before credit is given for the first semester.

* Absent on leave.

- 1-2. CROWN AND BRIDGE TECHNIQUE. A course of lectures, demonstrations, and laboratory work that includes all the more important forms of crowns and bridges. 32 lecture hours; 288 laboratory hours; 48 practice hours. PAGENKOPF, REYNOLDS, WELLS, NELSON, MACGIBBON, OTTO.
- 3-4. CROWN AND BRIDGE PRACTICE. A course of lectures and clinical practice covering the entire field of crown and bridge work, including porcelain crown work. 32 lecture hours; 192 practice hours. ORTON, BREKHUS, ROLL, VEJE.

DENTAL METALLURGY

Professor ALFRED OWRE; Associate Professor HARRY C. LAWTON.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|---|-------------------------|---------|------------|-----------------|
| 1. | Dental Metallurgy | 1 | Jr. | Chem. 21-22 |
| 1. DENTAL METALLURGY. Lectures, recitations, and demonstrations, taking up the most important metals with special reference to those used in dentistry. 16 lecture hours. OWRE, LAWTON. | | | | |

DRAWING AND DESCRIPTIVE GEOMETRY

Professor WILLIAM H. KIRCHNER; Instructors INGVALD KVITRUD, MAURICE B. LAGAARD.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|---|-------------------------|---------|------------|-----------------|
| 41-42. | Technical Drawing | 4 | All | None |
| 41-42. TECHNICAL DRAWING. Theoretical and practical graphics, reading and making of drawings. Projection, sketching, lettering, conventions, renderings, and translations. Preparation of conventional charts and diagrams of particular interest to dentists; also construction drawings of tools, instruments, and apparatus. 192 laboratory hours. KIRCHNER, KVITRUD, LAGAARD. | | | | |

ECONOMICS

Associate Professors ROY G. BLAKEY, WILLIAM W. CUMBERLAND; Instructors LLOYD M. CROSGRAVE, ALBERT C. JAMES, J. WARREN STEHMAN.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|---|-------------------------|---------|-----------------|-----------------|
| 3-4. | General Economics | 6 | Soph., jr., sr. | None |
| 3a,b-4. GENERAL ECONOMICS. Principles that underlie the present industrial order and the main public economic problems of to-day, such as the labor movement, social insurance, railway, trust, and other mo- | | | | |

nopoly problems. 96 lecture hours. BLAKEY, CUMBERLAND, CROSS-GRAVE, JAMES, STEHMAN.

MECHANICAL ENGINEERING

Professor JOHN J. FLATHER; Instructors FRANCIS A. HOBART, EDWARD QUIGLEY, WILLIAM H. RICHARDS.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|-------------------------------|---------|----------------|-----------------|
| 1-2. | Elementary Shop Practice..... | 4 | Fr., Pre-Dent. | |

1-2. ELEMENTARY SHOP PRACTICE. A general course in shop practice, which includes pattern making, foundry, forge, and machine work. 192 laboratory hours. HOBART, QUIGLEY, RICHARDS.

MILITARY SCIENCE AND TACTICS

Captain STARKEY Y. BRITT, U. S. Army, retired, Professor of Military Science and Tactics, Head of Department; RAY CUNNINGHAM, Adjutant and Assistant Commandant; Sergeant JOSEPH HAVLICEK, U. S. Army, retired, Instructor; BERT A. ROSE, Band Instructor.

REQUIRED WORK

All physically fit male students are required to take military training during the first two undergraduate years of their course unless they have secured such training at an approved institution endorsed by the Military Department. When this course is entered upon it must be carried to completion as a prerequisite for graduation. No credits are allowed for this work.

ELECTIVE WORK

(a) All juniors and seniors who have completed two years of drill may register for the course required by General Orders No. 49 War Department for members of the Reserve Officers' Training Corps. Such students sign a written agreement to continue in this corps for the remainder of the college course, the completion of this work is a prerequisite to promotion.

Juniors and seniors who take the course required by General Orders No. 49, will receive an allowance of thirty cents per day for subsistence while pursuing the course and will have all expenses paid to and from the encampments. They also are eligible for appointment as temporary second lieutenants in the Infantry branch of the Regular Army for six months with a salary of one hundred dollars per month upon graduation and commission in the Reserve Corps. The Reserve Corps furnishes officers for Citizens Training Camps in time of peace and commission in the United States Volunteers in time of war, such officers having preference for commissions in the volunteers immediately below experienced officers in the federal service.

The course includes three hours a week of drill and two of study in the Military Department and also includes recommended courses offered by the respective colleges which have a direct bearing on the work of the Corps, such as Military History and International Law in the Liberal Arts College. The work carries three credits in each semester in the Military Department, and such additional credits as the respective curricula of the colleges may permit.

(b) Any student having completed the two years of required Military Training may continue the work for credit in the third and fourth years. Credit for such work is allowed in practically all of the colleges of the University, the maximum being three credits a year.

OPERATIVE DENTISTRY

Professors JAMES M. WALLS, HENRY S. GODFREY; Associate Professor ROBERT O. GREEN, MARK O. PATTRIDGE; Assistant Professors NORMAN J. COX, JOSEPH M. LITTLE, RICHARD S. MAYBURY, JOSEPH F. SHELLMAN; Instructors WILLIAM C. NAEGELI, V. T. NYLANDER, PAUL S. PARKER, RAY E. RAMAKER, WILLIAM D. VEHE.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|---------------------------|---------|------------|-----------------|
| 2. | Operative Technique | 4 | Soph. | Dent. Anat. 3 |
| 3-4. | Operative Dentistry | 7 | Jr. | 2 |
| 5-6. | Operative Dentistry | 9 | Sr. | 3-4 |

2. OPERATIVE TECHNIQUE. This course consists of lectures, recitations, demonstrations, and laboratory work of a technical nature. 16 lecture hours; 144 laboratory hours. GREEN, PARKER, RAMAKER, and Assistants.

3-4. OPERATIVE DENTISTRY. This course consists of lectures, recitations, and clinical practice. 32 lecture hours; 240 practice hours. WALLS, GREEN, MAYBURY, LITTLE, SHELLMAN, NAEGELI, NYLANDER, PARKER, RAMAKER.

5-6. OPERATIVE DENTISTRY. A course of lectures, recitations, demonstrations, conference work, collateral reading, and clinical work covering the entire field of operative dentistry, including porcelain operations. 16 lecture hours; 384 practice hours. WALLS, GODFREY, PATTRIDGE, COX, LITTLE, MAYBURY, SHELLMAN, NAEGELI, VEHE.

ORAL SURGERY, PATHOLOGY, HYGIENE, ROENTGENOLOGY, AND DIAGNOSIS

Professor THOMAS B. HARTZELL; Associate Professors CHARLES A. ERDMANN, CHARLES A. GRIFFITH, RAY R. KNIGHT, HERMANN A. MAVES, CHARLES WIETHOFF; Assistant Professors HAROLD J. LEONARD, ARTHUR A. ZIEROLD; Instructors K. PAUL CARSON, WILLIAM A. GREY, CLARENCE

HERMANN, HELMER W. HOLMGREN, ELEANORA S. WHITE, DANIEL ZISKIN.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|--------------------------------|---------|------------|--------------------------------------|
| 1. | Oral Hygiene | 2 | Jr. | None |
| 2. | Oral Pathology | 3 | Sr. | Path. and Bact. |
| 3. | Oral Surgery | *9 | Sr. | Anat., Path., Bact., and Course 1 |
| | * { Principles of Surgery..... | 2 | | |
| | Surgical Anatomy | 2 | | |
| | Oral Surgical Operations.... | 2 | | |
| | Clinical Practice | 3 | | |

1. ORAL HYGIENE. A course of lectures and recitations on the hygiene of the mouth, practice in the technic of prophylaxis, treatment of gingivitis, examination, and diagnosis. 16 lecture hours; 48 practice hours. MAVES, LEONARD, CARSON, WHITE.
2. ORAL PATHOLOGY. Lectures and recitations involving general pathology as a foundation for special pathology of the teeth, peridental structures, and oral cavity, and including metastatic infections and neurological disturbances due to infections and irritations in the mouth. 48 lecture hours. LEONARD.
3. ORAL SURGERY. Four courses in principles of surgery; surgical anatomy; oral surgical operations and technic; practice in technic of extraction, oral roentgenology, hospital dental practice, pyorrhea treatment, oral diagnosis, local and nitrous oxide anaesthesia, oral surgery proper. 96 lecture hours; 144 practice hours. HARTZELL, ERDMANN, GRIFFITH, KNIGHT, MAVES, WIETHOFF, LEONARD, CARSON, GREY, HERMANN, HOLMGREN, WHITE, ZISKIN.

ORTHODONTIA

Professor OSCAR A. WEISS; Associate Professors WILLIAM E. LASBY, HARRY C. LAWTON; Assistant Professors MAX E. ERNST, CARL O. FLAGSTAD; Instructors BERT G. ANDERSON, HOUGHTON HOLLIDAY.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|-----------------------------|---------|------------|-----------------|
| 2. | Orthodontia Technique | 2 | Jr. | Pros. Tech. 4 |
| 3-4. | Orthodontia Practice | 4 | Sr. | 1 |

2. ORTHODONTIA TECHNIQUE. A course of lectures, recitations, and laboratory work in the making of regulating appliances. 96 laboratory hours. LAWTON, HOLLIDAY.
- 3-4. ORTHODONTIA PRACTICE. A course of lectures and recitations upon theory and practice and clinical work. Every student is required to treat at least one case of irregularity of the teeth. 32 lecture hours; 96 practice hours. WEISS, LASBY, ERNST, ANDERSON.

PATHOLOGY, BACTERIOLOGY, AND PUBLIC HEALTH

Associate Professor WINFORD P. LARSON; Assistant Professor HERBERT C. NELSON; Instructors ANNE BENTON, MARGARET WARWICK; Assistant HUGH T. JONES.

| No. | Title | Cred. | Offered to | Prereq. courses |
|-----|--------------|-------|------------|--------------------|
| 104 | Bacteriology | 4 | Jr. | Chem. 3&4, Zoology |
| 4 | Pathology | 4 | Jr. | Hist. 7 |

3. BACTERIOLOGY. Principles governing isolation and study of bacteria, with particular attention to bacteria and other parasites of mouth and teeth. Studies of pathogenic organisms which produce, or appear in rheumatism, their relation to infections of teeth. 32 lecture hours; 96 laboratory hours. LARSON, NELSON, BENTON, JONES.
4. PATHOLOGY. The study and recognition of gross and microscopic disease processes. The principles of general pathology with special consideration of diseases peculiar to the mouth and teeth and important in dental practice. 32 lecture hours; 96 laboratory hours. NELSON, WARWICK, JONES.

PHARMACOLOGY AND THERAPEUTICS

Professor ARTHUR R. HIRSCHFELDER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|--|---------|------------|-----------------|
| 2. | General Pharmacology | 4 | Jr. | Chem. 21, 22 |
| 2. | GENERAL PHARMACOLOGY AND THERAPEUTICS. As applied to dentistry comprises a study of the properties, action, and therapeutic application of the principal drugs used in dentistry with exercises in prescription writing. 64 lecture hours. HIRSCHFELDER. | | | |

PSYCHOLOGY

Professor MELVIN E. HAGGERTY;* Assistant Professor JOSEPH PETERSON.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|--|---------|------------|-----------------|
| 1-2. | General Psychology | 6 | Fr. | None |
| 1-2. | GENERAL PSYCHOLOGY. The aims and methods of psychology; the facts, laws and functions of mental life; development and learning in relation to training and instinct. 96 lecture hours. HAGGERTY, PETERSON. | | | |

* Absent on military service.

PHYSICAL EDUCATION

FOR MEN

Director LOUIS J. COOKE; Assistant Director WILLIAM K. FOSTER.

The purpose of the department is to provide all men of the University opportunity for exercise in order to maintain and build up their general health. It also provides special training for the correction of physical defects and functional derangements.

A physical examination is required of all new matriculants, and of all others using the department privileges, at the beginning of the year, and as often during their college course as their physical condition may indicate. Students taking the required work in physical education are examined also at the close of the year. A study of these records shows a marked improvement in the standard of health of the average student during his college course.

The gymnasium, swimming pool, and baths are open to all students of the University, who are free to use the apparatus and to pursue a course in physical training under the supervision of the Director and his assistants.

Those students taking the required course in physical education who can not swim, must make a reasonable effort, as determined by the department, to pass the swimming and life-saving requirements, and will be assigned special hours for instruction.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|------------------------|---------|------------|-----------------|
| 1. | Personal Hygiene | 1 | All | None |

I. PERSONAL HYGIENE. Two hours per week; first six weeks of first semester. Examination at close of course. COOKE.

A special lecture on sex hygiene is given sometime during the first ten days of the autumn semester, with required attendance on the part of all freshmen.

PHYSICAL EDUCATION

FOR WOMEN

Associate Professor J. ANNA NORRIS; Assistant Professor MAY S. KISSOCK; Instructors VALERIA G. LADD, ALICE H. TOLG.

This department aims to promote the health of the women students. It gives physical examination and advice to all on entrance; plans systematically to keep in close touch with them during their first year in college; conducts yearly consultations with, and examines when necessary, all upper-class students; gives courses in hygiene; organizes physical work to meet the varying needs and physical tastes of students; co-operates closely with the Woman's Athletic Association in encouraging and organizing athletic sports; holds regular office hours for the purpose

of consultation with all students who desire its advice; and investigates cases of illness which come to its attention.

Work in this department is required of all newly entering students (see Courses 1-2 and 11), of sophomores who can not pass the swimming examination, and of all students permitted, for reasons connected with their physical condition, to carry less than the minimum number of credit hours. Physical examinations or consultations required annually of all students.

Elective work without credit arranged in social dancing, gymnastic dancing, swimming, fencing, basket-ball, baseball, and other activities.

PHYSICS

Professor ANTHONY ZELENY; Assistant Professor PAUL E. KLOPSTEG.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|-----------------------|---------|----------------------|-----------------|
| 1-2. | General Physics | 6 | Fr., soph., jr., sr. | None |

1. GENERAL PHYSICS. Mechanics of solids, fluids, sound, and heat. Treatment experimental rather than mathematical; fundamental principles. First part of general Course 1-2. Preferably taken with Course 3, may be taken separately. One lecture, two recitations per week. ZELENY, KLOPSTEG.
2. GENERAL PHYSICS. Electricity, magnetism, and light. Treatment experimental; fundamental principles, including those of radioactivity, ionization, X-radiation. Second part of general Course 1-2. Preferably taken with Course 4, may be taken separately. One lecture, two recitations per week. ZELENY, KLOPSTEG.

PHYSIOLOGY

Professors ELIAS P. LYON, FREDERICK H. SCOTT; Associate Professor RICHARD OLDING BEARD; Assistant Professor CHAUNCEY J. V. PETTIBONE.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-----------------------------|---------|------------|-----------------|
| 4. | Physiologic Chemistry | 3 | Soph. | Chem. 37 |
| 6. | Physiology | 4 | Soph. | An. Biol. |

4. PHYSIOLOGIC CHEMISTRY. A course of lectures and laboratory studies of the compounds occurring in the animal body; of the food-stuffs; the digestion and of urinalysis. 32 lecture hours; 32 laboratory hours. PETTIBONE and Assistants.
6. PHYSIOLOGY. Lectures and laboratory exercises. The study of muscle-nerve functions; of blood, the circulation, respiration, digestion, secretion, and excretion. 48 lecture hours; 80 laboratory hours. SCOTT, BEARD, and Assistants.

PROSTHETIC DENTISTRY

Professor OSCAR A. WEISS; Associate Professors GEORGE M. DAMON, WILLIAM F. LASBY, HARRY C. LAWTON; Assistant Professors OSCAR COOPERMAN, CARL O. FLAGSTAD, CARL H. PETRI, CHARLES E. RUDOLPH; Instructors BERT C. ANDERSON, RUDOLPH W. DELTON, LEE H. HARKER, HOUGHTON HOLLIDAY, ANDREW J. WEISS.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|----------------------------|---------|------------|-----------------|
| 1-2. | Prosthetic Technique | 6 | Fr. | None |
| 3-4. | Prosthetic Technique | 4 | Soph. | 1-2 |
| 5-6. | Prosthetic Practice | 5 | Jr. | 3-4 |
| 7-8. | Prosthetic Practice | 3 | Sr. | 5-6 |

- 1-2. PROSTHETIC TECHNIQUE. This course consists of lectures and technique work in the laboratory, comprising impression materials and their uses and the different processes of plate work. 32 lecture hours; 192 laboratory hours. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER.
- 3-4. PROSTHETIC TECHNIQUE. The course consists of lectures, recitations, and laboratory work covering the principles and practice of plate work. 192 laboratory hours. LAWTON, ANDERSON, DELTON, HOLLIDAY.
- 5-6. PROSTHETIC PRACTICE. A course of lectures and recitations upon theory and practice and clinical work in the simpler forms. 32 lecture hours; 144 practice hours. WEISS, LASBY, ANDERSON.
- 7-8. PROSTHETIC PRACTICE. A course of lectures and clinical work in special prosthesis, as cleft palate and facial restoration. 144 practice hours. WEISS, LASBY, FLAGSTAD, ANDERSON.

RHETORIC

Professor JOSEPH M. THOMAS; Instructor CYRIL A. HERRICK.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-------------------------------|---------|------------|-----------------|
| 3. | Composition and Rhetoric..... | 3 | Fr. | None |
| 4. | Composition and Rhetoric..... | 3 | Fr. | None |

3. COMPOSITION AND RHETORIC. Review of grammar; study of simple expository composition; theme writing; reading and discussion of a selected list of masterpieces. 96 lecture hours. HERRICK.
4. COMPOSITION AND RHETORIC. Study and analysis of selected essays; imitative and original writing; reading and discussion of a selected list of masterpieces. 96 lecture hours. HERRICK.

THEORY AND PRACTICE OF DENTISTRY

Professor ALFRED OWRE and Associates.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|--|---------|------------|-----------------|
| 2. | Theory and Practice of Dentistry..... | 2 | Sr. | None |
| 2. | THEORY AND PRACTICE OF DENTISTRY. A lecture and conference course in the theory and practice of dentistry, applied economics, jurisprudence, psychology, ethics, and art. 32 lecture hours. OWRE and Associates. | | | |

For Mathematics, History, and Languages, see Bulletin of the College of Science, Literature, and the Arts.

STUDENTS

SENIORS

| | | |
|-------------------|-------------------|-----------------|
| O. H. Abrahams | *G. A. Johnson | C. W. Passer |
| *A. W. Albrecht | *Harvey Johnson | W. H. Pattridge |
| C. O. Anderson | H. E. Johnson | E. H. Pearson |
| *E. J. Anderson | R. E. Johnson | *J. A. Peterson |
| G. R. Anderson | *C. W. Kelsey | L. C. Peterson |
| R. H. Anderson | F. K. Kirkpatrick | E. W. Plonty |
| *C. B. Bang | V. L. Kirkpatrick | L. R. Priske |
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| *W. V. Buck | *E. T. Lee | A. F. Simon |
| *M. H. Carlson | *A. E. Lucian | *C. E. Snyder |
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| *C. L. Eklund | W. H. McKinny | H. G. Swennes |
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| *R. M. Hoitomt | F. C. Obermeyer | *E. Zimmerman |
| A. H. F. Homme | *R. C. Olson | |

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* Served as a senior adviser.

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F. C. Yetter

*The Bulletin
of the University of
Minnesota*

*The College of Dentistry
Announcement for the Year
1917-1918*



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University of Minn.
- Coll. of Dentistry - 1917-18

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1917/18

| 1917 | | | | | | | 1918 | | | | | | | | | | | | | |
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| JULY | | | | | | | JANUARY | | | | | | | JULY | | | | | | |
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| AUGUST | | | | | | | FEBRUARY | | | | | | | AUGUST | | | | | | |
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| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 26 | 27 | 28 | 29 | 30 | 31 | .. | 24 | 25 | 26 | 27 | 28 | .. | .. | 25 | 26 | 27 | 28 | 29 | 30 | 31 |
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| SEPTEMBER | | | | | | | MARCH | | | | | | | SEPTEMBER | | | | | | |
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| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 29 | 30 | .. | .. | .. | .. | .. |
| 30 | .. | .. | .. | .. | .. | .. | 31 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| OCTOBER | | | | | | | APRIL | | | | | | | OCTOBER | | | | | | |
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| 28 | 29 | 30 | 31 | .. | .. | .. | 28 | 29 | 30 | .. | .. | .. | .. | 27 | 28 | 29 | 30 | 31 | .. | .. |
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| NOVEMBER | | | | | | | MAY | | | | | | | NOVEMBER | | | | | | |
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| 18 | 19 | 20 | 21 | 22 | 23 | 24 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 25 | 26 | 27 | 28 | 29 | 30 | .. | 26 | 27 | 28 | 29 | 30 | 31 | .. | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
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| DECEMBER | | | | | | | JUNE | | | | | | | DECEMBER | | | | | | |
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UNIVERSITY CALENDAR

1917-1918

1917

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|-----------|-----|-----------|---|
| September | 26 | Wednesday | Registration closes for all students |
| September | 26 | Week | Fees payable for all students |
| October | 3 | | |
| October | 1 | Monday | First semester evening extension classes begin |
| October | 2-9 | Week | Examinations for removal of conditions (except for Colleges of Agriculture and Forestry), and entrance examinations |
| October | 10 | Wednesday | First semester begins |
| October | 15 | Monday | Agricultural College, farm experience examinations |
| October | 18 | Thursday | Senate meeting, 4:00 p.m. |
| October | 29 | Monday | Dairy School opens |
| November | 5 | Monday | School of Agriculture, first term begins |
| November | 28 | Wednesday | Thanksgiving recess begins 9:00 p.m. |
| December | 1 | Saturday | Dairy School closes |
| December | 3 | Monday | Thanksgiving recess ends 8:00 a.m. |
| December | 3-8 | Week | Second semester condition examinations, Colleges of Agriculture and Forestry |
| December | 3-8 | Week | Short course for ice-cream makers |
| December | 5 | Wednesday | Medical School second quarter begins |
| December | 20 | Thursday | Senate meeting, 4:00 p.m. |
| December | 21 | Friday | School of Agriculture, first term closes |
| December | 21 | Friday | Christmas vacation begins 9:00 p.m. |

1918

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|----------|-----|-----------|---|
| December | 31 | Week | Farmers' and Home Makers' Week |
| January | 5 | | Short Course |
| January | 2 | Wednesday | Christmas vacation ends 8:00 a.m. |
| January | 2 | Wednesday | School of Embalming begins, eight weeks' vacation |
| January | 8 | Tuesday | School of Agriculture, second term begins |
| January | 25 | Friday | First semester evening extension classes close |
| February | 4 | Monday | Second semester registration closes |
| February | 4 | Monday | Second semester evening extension classes begin |
| February | 4-9 | Week | Merchants' Short Course |

| | | | |
|----------|-----|-----------|---|
| February | 11 | Monday | Final examinations begin |
| February | 11 | Monday | Payment of fees for second semester closes |
| February | 12 | Tuesday | Lincoln's Birthday; a holiday |
| February | 18 | Monday | Second semester begins |
| February | 21 | Thursday | Senate meeting, 4:00 p.m. |
| February | 22 | Friday | Washington's Birthday; a holiday |
| March | 27 | Wednesday | School of Agriculture closes |
| March | 28 | Thursday | Easter recess begins 9:00 p.m. |
| April | 1 | Monday | Easter recess ends 8:00 a.m. |
| April | 1-6 | Week | Boys' and Girls' Week |
| April | 1-6 | Week | Condition examinations in certain colleges |
| April | 15 | Monday | Medical School fourth quarter begins |
| April | 30 | Tuesday | Traction Engineering Short Course begins |
| May | 16 | Thursday | Senate meeting, 4:00 p.m. |
| May | 24 | Friday | Second semester evening extension classes close |
| May | 30 | Thursday | Memorial Day; a holiday |
| May | 31 | Friday | Traction Engineering Short Course closes |
| June | 8 | Saturday | Final examinations begin 2:00 p.m. |
| June | 15 | Saturday | Second semester closes |
| June | 16 | Sunday | Baccalaureate service |
| June | 17 | Monday | Senior Class Day exercises |
| June | 19 | Wednesday | Alumni Day |
| June | 20 | Thursday | Forty-sixth Annual Commencement |
| June | 21 | Friday | Summer vacation begins |
| June | 24 | Monday | Summer Session begins |

The University year for 1918-19 probably will begin Tuesday, September 17. Classes will begin September 25.

COLLEGE OF DENTISTRY

FACULTY

- MARION LEROY BURTON, Ph.D., D.D., LL.D., President 1005 5th St. S. E.
CYRUS NORTHROP, LL.D., President Emeritus 519 10th Ave. S. E.
ALFRED OWRE, B.A., M.D., C.D., D.M.D., Dean, Professor of Theory and
Practice of Dentistry and Dental Metallurgy University of Minnesota
MOSES BARRON, B.S., M.D., Assistant Professor of Pathology
763 Holly Ave., St. Paul
RICHARD OLDING BEARD, M.D., Associate Professor of Physiology
University of Minnesota
ELEXIOUS T. BELL, M.D., Assistant Professor of Pathology
215 Walnut St. S. E.
PETER J. BREKHUS, B.A., D.D.S., Associate Professor of Crown and
Bridge Work 3719 Pleasant Ave.
EDGAR D. BROWN, Phm.D., M.D., Associate Professor of Pharmacology
3525 3rd Ave. S.
LOUIS J. COOKE, M.D., Director Physical Education for Men
909 6th St. S. E.
OSCAR COOPERMAN, D.D.S., Assistant Professor in Prosthetic Dentistry
and Dental Anatomy 638 6th Ave. N.
RALPH W. COUNTRYMAN, D.D.S., Assistant Professor in Operative Den-
tistry 401 Reid Corner
NORMAN J. COX, B.S., D.M.D., Assistant Professor of Operative Dentistry
986 15th Ave. S. E.
GEORGE M. DAMON, D.D.S., Associate Professor of Prosthetic Dentistry
and Dental Anatomy 3340 Portland Ave.
BROR E. DAHLGREN, D.M.D., Associate Professor of Theory and Practice
1708 Portland Ave.
CHARLES A. ERDMANN, M.D., Associate Professor of Applied Anatomy
612 9th Ave. S. E.
CARL O. FLAGSTAD, D.D.S., Assistant Professor in Prosthetic Dentistry
and Orthodontia 229 Cedar Ave.
GEORGE B. FRANKFORTER, Ph.D., Professor of Chemistry and Dean of the
School of Chemistry 525 E. River Road
HENRY S. GODFREY, D.M.D., Professor of Operative Dentistry
1766 Girard Ave. S.
ROBERT O. GREEN, D.D.S., Associate Professor of Operative Dentistry
828 Lowry Bldg., St. Paul
CHARLES A. GRIFFITH, D.D.S., Associate Professor of Oral Surgery
1917 Hamline Ave.
WILLIAM K. FOSTER, LL.M., Assistant Director Physical Education for
Men 652 Erie St. S. E.

- ROBERT A. HALL, Ph.D., Assistant Professor of Pharmacology
323 6th Ave. S. E.
- THOMAS B. HARTZELL, D.M.D., M.D., Professor of Oral Surgery, Therapeutics, and Clinical Pathology
716 Donaldson Bldg.
- ARTHUR D. HIRSCHFELDER, B.S., M.D., Professor of Pharmacology and Director of the Department
906 5th St. S. E.
- CLARENCE M. JACKSON, M.S., M.D., Professor of Anatomy and Director of the Department
428 Walnut St. S. E.
- WILLIAM H. KIRCHNER, B.S., Professor of Drawing and Descriptive Geometry
722 10th Ave. S. E.
- RAY R. KNIGHT, B.A., M.D., Assistant Professor of Roentgenology
304 Pillsbury Bldg.
- WINFORD P. LARSON, M.D., Assistant Professor of Bacteriology
614 9th Ave. S. E.
- WILLIAM F. LASBY, B.A., D.D.S., Associate Professor of Prosthetic Dentistry and Orthodontia
425 Walnut St. S. E.
- HARRY C. LAWTON, D.D.S., Associate Professor of Prosthetic Dentistry, Orthodontia, and Dental Metallurgy
1064 Lombard Ave., St. Paul
- THOMAS G. LEE, B.S., M.D., Professor of Comparative Anatomy
509 E. River Road
- ELMER J. LUND, Ph.D., Assistant Professor of Zoology
- ELIAS P. LYON, Ph.D., M.D., Professor of Physiology and Director of the Department
421 Union St. S. E.
- WILLIAM McDUGALL, D.D.S., Associate Professor in Crown and Bridge Work
521 Syndicate Bldg.
- RICHARD S. MAYBURY, D.D.S., Assistant Professor in Operative Dentistry
1931 4th Ave. S.
- HERMANN A. MAVES, D.D.S., Associate Professor of Oral Surgery
505 Donaldson Bldg.
- OWEN R. MEREDITH, First Lieutenant, U. S. Infantry, Assistant Professor of Military Science and Tactics
- GEORGE W. MOSES, Major, U. S. Cavalry, Professor of Military Science and Tactics
1308 5th St. S. E.
- HENRY F. NACHTRIEB, B.S., Professor of Animal Biology, Head of Department of Animal Biology and Curator of the Zoological Museum
905 6th St. S. E.
- FORREST H. ORTON, D.D.S., Professor of Crown and Bridge Work
653 Goodrich Ave., St. Paul
- ALFRED A. PAGENKOPF, D.D.S., Associate Professor of Crown and Bridge Work
1482 Grand Ave., St. Paul
- MARK O. PATTRIDGE, D.D.S., Assistant Professor in Operative Dentistry
802 E. Lake St.
- CARL H. PETRI, D.D.S., Assistant Professor in Prosthetic Dentistry and Dental Anatomy
1301 E. Franklin
- GEORGE W. REYNOLDS, D.D.S., Associate Professor of Crown and Bridge Work
3811 10th Ave. S.
- HAROLD E. ROBERTSON, B.A., M.D., Associate Professor of Pathology and Acting Director of the Department
507 Essex St. S. E.

- WILLIAM A. ROLL, D.D.S., Assistant Professor in Crown and Bridge Work
521 Syndicate Bldg.
- CHARLES E. RUDOLPH, D.D.S., Assistant Professor in Prosthetic Dentistry
and Dental Anatomy
- FREDERICK H. SCOTT, Ph.D., M.B., D.Sc., Associate Professor of Physi-
ology 1307 6th St. S. E.
- JOSEPH E. SHELLMAN, D.D.S., Assistant Professor in Operative Dentistry
903 Lowry Bldg., St. Paul
- RICHARD E. SCAMMON, Ph.D., Associate Professor of Anatomy
200 Harvard St. S. E.
- CHARLES PETER SIGERFOOS, Ph.D., Professor of Zoology
1023 University Ave. S. E.
- THEODORE B. TAYLOR, Captain, U. S. Cavalry, Assistant Professor of Mili-
tary Science and Tactics 1301 5th St. S. E.
- JOSEPH M. THOMAS, Ph.D., Professor of Rhetoric, Head of Department
818 University Ave. S. E.
- JAMES M. WALLS, D.M.D., Professor of Operative Dentistry
828 Lowry Bldg., St. Paul
- OSCAR A. WEISS, D.M.D., Professor of Prosthetic Dentistry and Ortho-
dontia 1602 Fremont Ave. N.
- AMOS S. WELLS, B.A., D.D.S., Associate Professor of Crown and Bridge
Work Berkeley Hotel
- CHARLES WIETHOFF, D.D.S., Associate Professor of Crown and Bridge
Work 716 Donaldson Bldg.
- M. RUSSELL WILCOX, M.D., Assistant Professor of Physiology
802 Donaldson Bldg.
- JAMES B. WOOLNOUGH, Captain, U. S. Infantry, Assistant Professor of
Military Science and Tactics
- GEORGE D. ALLEN, M.A., Instructor in Animal Biology 1116 5th St. S. E.
- BERT G. ANDERSON, D.D.S., Instructor in Prosthetic Dentistry and Ortho-
dontia 923 Lowry Bldg., St. Paul
- ANNE C. BENTON, B.A., Instructor in Pathology and Bacteriology
2024 Queen Ave. S.
- CHARLES H. BLITMAN, C.E., Instructor in Drawing and Descriptive Geom-
etry 1317 7th St. S. E.
- K. PAUL CARSON, D.D.S., Instructor in Oral Surgery 3325 4th Ave. S.
- LILLIAN COHEN, Ph.D., Instructor in Chemistry 415 E. 14th St.
- DAVID CROWTHER, Instructor in Dental Mechanics
- RUDOLPH W. DELTON, D.D.S., Instructor in Prosthetic Dentistry and Or-
thodontia 312 Walnut St. S. E.
- MAX E. ERNST, LL.B., D.D.S., Instructor in Orthodontia and Dental Juris-
prudence 614 Lowry Bldg., St. Paul
- WILLIAM A. GREY, D.D.S., Instructor in Oral Surgery
923 Lowry Bldg., St. Paul
- LEE H. HARKER, D.D.S., Instructor in Prosthetic Dentistry and Dental
Anatomy 804 Pillsbury Bldg.

- MARY V. HARTZELL, D.M.D., Instructor in Oral Surgery 1224 Mary Place
 ARTHUR T. HENRICI, M.D., Instructor in Bacteriology 2443 Garfield Ave. S.
 RAYMOND R. HENRY, D.D.S., Instructor in Operative Dentistry 828 Lowry Bldg., St. Paul
 CYRIL A. HERRICK, B.A., Instructor in Rhetoric 1118 7th St. S. E.
 WILLIAM C. JOHNSON, B.A., M.D., Instructor in Pathology 313 8th Ave. S. E.
 FRANCIS B. KINGSBURY, Ph.D., Instructor in Physiology and Physiologic Chemistry 209 State St. S. E.
 WOLF KRITCHEVSKY, Ph.D., Instructor in Chemistry 908 Logan Ave. N.
 HAROLD J. LEONARD, B.A., D.D.S., Instructor in Oral Surgery 515 Syndicate Bldg.
 JOSEPH M. LITTLE, D.D.S., Instructor in Operative Dentistry 1364 Summit Ave., St. Paul
 EVERETT E. MACGIBBON, D.D.S., Instructor in Crown and Bridge Work 716 Donaldson Bldg.
 JOHN F. MCCLENDON, Ph.D., Instructor in Physiology 1307 6th St. S. E.
 FRANK H. MCDUGALL, Ph.D., Instructor in Chemistry
 LAWRENCE J. MORTENSON, E.E., Instructor in Drawing and Descriptive Geometry 1214 5th St. S. E.
 WILLIAM C. NAEGLI, D.D.S., Instructor in Operative Dentistry 1600 Western Ave.
 HERBERT C. NELSON, D.D.S., Instructor in Crown and Bridge Work 921 Lowry Bldg., St. Paul
 CARL OTTO, D.D.S., Instructor in Crown and Bridge Work 921 Lowry Bldg., St. Paul
 PAUL S. PARKER, D.D.S., Instructor in Prosthetic Dentistry, Dental Anatomy, and Operative Dentistry 310 Donaldson Bldg.
 CHAUNCEY J. V. PETTIBONE, Ph.D., Instructor in Physiology and Physiologic Chemistry 112 Church St. S. E.
 JOHN C. WEST, B.S., Instructor, Physical Education for Men 411 17th Ave. S. E.
 RAY E. RAMAKER, D.D.S., Instructor in Operative Dentistry 512 Physicians' and Surgeons' Bldg.
 BERT A. ROSE, Band Instructor 710 7th St. S. E.
 CARL L. SCHUMANN, Ph.D., Instructor in Chemistry 317 17th Ave. S. E.
 FRANK M. SMOYER, B.A., Instructor in Rhetoric and Public Speaking 2021 Girard Ave. S.
 CHESTER A. STEWART, M.A., Instructor in Anatomy 1819 4th St. S. E.
 RUTCHER SKAGERBERG, B.S., Instructor in Drawing and Descriptive Geometry 722 13th Ave. S. E.
 EARL K. STRACHAN, Ph.D., Instructor in Chemistry 826 University Ave. S. E.
 WILLIAM D. VEHE, D.D.S., Special Instructor in Porcelain Work 1010 Donaldson Bldg.
 PERCY A. WARD, B.S., M.D., Instructor in Pathology and Bacteriology

MARGARET WARWICK, B.S., M.D., Instructor in Pathology

1516 7th St. S. E.

ANDREW J. WEISS, Instructor in Technics

3708 Stevens Ave.

ASSISTANTS

EDWARD D. ANDERSON, Assistant in Physiology

HAROLD P. DIEHL, Assistant in Pathology and Bacteriology

HAROLD C. HILLMAN, Assistant in Crown and Bridge Work

KANO IKEDA, Assistant in Pathology and Bacteriology

CLARENCE I. LILLEHEI, Assistant in Operative Dentistry

EDGAR H. NORRIS, Assistant in Anatomy

CHARLES H. PASKE, Assistant in Crown and Bridge Work

ADOLPH RINGOEN, Assistant in Animal Biology

LLOYD H. RUTLEDGE, Assistant in Anatomy

HELEN SANBORN, B.A., Assistant in Animal Biology

FAUS P. SILVERNALE, Assistant in Anatomy

EDWARD F. SLATER, Assistant in Physiology

ALBERT M. SNELL, Assistant in Physiology

LEHMAN WENDELL, Assistant in Anatomy

WALTER W. ZETTLER, Assistant in Bacteriology

GENERAL INFORMATION

CURRICULUM

The course in the College of Dentistry leads to the degree of Doctor of Dental Surgery and covers a period of four years collegiate study.

For statements of entrance requirements, registration, and fees, see Bulletin of General Information.

For schedule of lectures, announcements, changes in college rules, etc., see bulletin board. The Rules for the Guidance of Students are printed in a separate booklet; in this will also be found a list of the required instruments.

SIX-YEAR COURSE IN ARTS AND DENTISTRY, LEADING TO THE DEGREES OF BACHELOR OF ARTS AND DOCTOR OF DENTAL SURGERY

During the first three years of this course the student does his work in the College of Science, Literature, and the Arts, subject to the regulations governing other Arts students and must secure ninety credits, including fifteen credits in starred courses. The final year of the course in the College of Dentistry counts as the equivalent of the fourth year (thirty credits) of the Arts course. During the four years the student must earn one hundred and twenty honor points.

ADMISSION

General Requirements

1. English, three units.
2. Chemistry,* one unit, and Manual Training recommended.
3. Mathematics: Elementary Algebra, one unit; Plane Geometry, one unit.
4. Enough additional work to make in all fifteen units of which not more than four may be in Group F.

On account of the limited capacity of the College of Dentistry, not more than ninety freshmen can be admitted. Applications for admission should be in the Registrar's office not later than July 25.

Candidates will be selected according to quantity and quality of preparation, and when necessary their fitness shall be determined by an examination and conference with the Student Work Committee.

All other qualifications being equal, residents of Minnesota will be given prior consideration for vacancies existing at the date of their application.

* Those who have not had good training in preparatory Chemistry will take a combined course of ten credits in General Chemistry and Qualitative Analysis.

All freshmen students, entering the College of Dentistry must confer with the Dean of the College some time before their matriculation or immediately after.

EXPENSES

| | |
|----------------------------|----------|
| Freshman year | |
| Annual incidental fee..... | \$100.00 |
| Instruments | 125.00 |
| Books | 25.00 |
| Sophomore year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 150.00 |
| Books | 35.00 |
| Junior year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 75.00 |
| Books | 25.00 |
| Senior year | |
| Annual incidental fee..... | \$175.00 |
| Instruments | 5.00 |
| Books | 10.00 |

SUMMER SESSION

A Summer Course of six weeks is offered in the Departments of Anatomy, Animal Biology, Bacteriology, Chemistry, Crown and Bridge Work, Dental Anatomy, Operative Dentistry, Orthodontia, Physiology, and Prosthetic Dentistry.

EXTENSION WORK

Instruction in all the departments of the College of Dentistry will be given to practitioners upon registration for not less than one quarter of the College year.

MILITARY DRILL

Military Drill will be required of all men in the freshman and sophomore classes.

PHYSICAL EDUCATION

A course is offered in Physical Education for Men and Women.

RULES AND REGULATIONS

Examinations, Standings, and Conditions

No student with an entrance condition will be allowed to register for any second-year subject, nor will any student with any first-year condition or failure be allowed to register for a third-year subject.

No student will be allowed to omit any freshman work in order to make up entrance conditions, except by special permission of the department affected.

Students will not be permitted to substitute private work in any branch for the regular college courses.

Final examination in every required subject is held at the close of the work at the end of the semester or quarter, according to the extent of the course given. The examinations at the end of semester or quarter are only for those who are taking the courses, while the condition examinations are only for those who are attempting to remove conditions.

The final standing of any student in a given subject shall be determined as the result of (a) practical work (laboratory or clinical), (b) recitations, and (c) oral or (d) written examinations. All of these factors shall be taken into consideration in making up the final grading in any subject.

Students' standing shall be determined at the end of each quarter by a conference of the departments in which the work is pursued during that year.

All standings shall be reported officially to and from the Registrar's Office at the end of each semester.

A uniform marking system has been adopted for the whole University. Four passing grades, indicated by the symbols *A*, *B*, *C*, and *D*, represent differing degrees of merit. The symbol *E* represents a condition, which may be removed by examination and by such supplementary work as the department imposing it may require. *F* stands for a failure and calls for a repetition of the work in course. *I* stands for incomplete and grants the student further time for the completion of the required work.

Regular examinations for the removal of conditions shall be given at no other time than (1) the week following the Easter recess and (2) the registration week in September.

Students having conditions will be subject to the action of the Student Work Committee.

A condition not removed at the first opportunity becomes a failure subject to the rules governing failures.

Failures necessitate the taking of the work again in class.

A student carrying less than the complete schedule of work may pay fees on a clock-hour basis.

A student who is conditioned in the majority of the subjects given in any year will become a *failed* student and must repeat the entire work of that year.

Students who carry *failures* into a succeeding year may find a resultant conflict of study hours; in that event they will give preference to the unfinished studies of the lower conflicting course.

Any student reported below grade in sixty per cent of his work at the close of a given semester shall not be allowed to re-enter the College of Dentistry except upon the specific approval of the faculty.

Probation.—Such student shall then be allowed to enter on probation; and, if reported by the middle of the semester or after as delinquent

in two or more subjects, he shall be dropped without further action for that year.

Work limited.—Students pursuing any continuous subject who have done such poor work in the first semester as to receive a condition or failure in such subject, shall not be allowed to elect another subject in place of that in which the condition or failure was received, but shall be required to devote their full time to the remaining subjects of the course.

Exception to this rule shall be made only by the Committee on Students' Work after full investigation.

Electives.—A student may elect a subject in another department if his standing in the regular course is satisfactory and on approval of the Student Work Committee.

Attendance and Discipline

All lectures, laboratory, and infirmary courses and clinics must be taken in full and must invariably be entered upon during the week in which they begin.

All students are required to provide themselves with instruments, books, tools, and materials as prescribed by the college.

Tardiness and absences are controlled by the principle that each student must do the full work of the course.

No student whose absences in any semester exceed four weeks in the aggregate shall be admitted to final examination without special permission of the Students' Work Committee.

Any student's registration may be refused or cancelled by the Registrar at the request of the Students' Work Committee on account of absences, indifference to study, poor scholarship, disorderly or immoral conduct, and for dishonesty in classroom or laboratory work.

The practice of dentistry by students, except under the direct supervision of a preceptor, is prohibited by law in the State of Minnesota. Students violating this law will be suspended or expelled.

Except in cases of required work students are not allowed to obligate themselves in the Military Department, band, or other college activities, without permission from the Faculty.

Eligibility Regulations

No student shall take part in any public performance of a dramatic or musical club, or be eligible to election or appointment to official positions upon the boards of student publications, or take part in intercollegiate debates or oratorical contests, unless he has a clear record at the time.

ADVANCED STANDING

Applicants for advanced standing must present satisfactory evidence of possessing the preliminary educational qualifications required of the class they desire to enter.

They must also satisfy the professors of the branches from which they wish to be exempt, that the work pursued by them in other institutions was equal in scope and amount to that passed by the class they propose to enter.

No credits are accepted unconditionally, the Faculty reserving the privilege of examining any applicant when deemed necessary.

All certificates pertaining to advanced standing must be presented to the Dean, who will send them to the respective professors for acceptance or report of further requirements for acceptance.

REQUIREMENTS FOR GRADUATION

A candidate for the degree of Doctor of Dental Surgery must be twenty-one years of age, of good moral character, and, after having satisfied all the requirements for admission to the college, must have complied with all the rules and regulations of the college and obtained regular credit for all subjects of the entire course.

COURSE OF STUDY

| | First Semester | | Second Semester | | Total | |
|--|----------------|-------|-----------------|-------|---------|-------|
| | Credits | Hours | Credits | Hours | Credits | Hours |
| Freshman Year | | | | | | |
| Anatomy, Dental | 1 | 16 | 2 | 64 | | |
| Animal Biology | 3 | 96 | 3 | 96 | | |
| *Chemistry | 5 | 160 | 5 | 160 | | |
| English, Rhetoric | 3 | 48 | 3 | 48 | | |
| Military Science and Tactics..... | | | | | | |
| Prosthetic Lecture and Technique..... | 3 | 112 | 3 | 112 | | |
| †Technical Drawing | 2 | 96 | 2 | 96 | | |
| Physical Education | 1 | 16 | | | | |
| | 18 | 544 | 18 | 576 | 36 | 1,120 |
| Sophomore Year | | | | | | |
| Anatomy, Gross | 5 | 144 | 5 | 144 | | |
| Anatomy, Histology and Embryology.... | 4 | 128 | | | | |
| Anatomy, Dental | 3 | 96 | | | | |
| Chemistry, Organic | 3 | 96 | | | | |
| Military Science and Tactics..... | | | | | | |
| Operative Dentistry Technique..... | | | 4 | 160 | | |
| Physiology and Physiological Chemistry. | | | 7 | 192 | | |
| Prosthetic Lectures and Technique..... | 3 | 144 | 2 | 96 | | |
| | 18 | 608 | 18 | 592 | 36 | 1,200 |
| Junior Year | | | | | | |
| Bacteriology, General and Special..... | 4 | 112 | | | | |
| Clinical Practice | 4 | 192 | 10 | 480 | | |
| Crown and Bridge Lec. and Technique. | 4 | 160 | | | | |
| Dental Metallurgy | 1 | 16 | | | | |
| Operative Dentistry Lec. and Rec..... | 1 | 16 | 1 | 16 | | |
| Orthodontia Technique | 2 | 96 | | | | |
| Pathology, General and Special..... | | | 4 | 112 | | |
| Pharmacology | | | 3 | 48 | | |
| Prosthetic Dentistry Lec. and Rec..... | 2 | 32 | | | | |
| | 18 | 624 | 18 | 656 | 36 | 1,280 |
| Senior Year | | | | | | |
| Clinical Practice | 12 | 576 | 12 | 576 | | |
| Crown and Bridge Work Lec. and Rec.. | 1 | 16 | 1 | 16 | | |
| Operative Dentistry Lec. and Rec. | 1 | 16 | | | | |
| Oral Surg., Clin. Path. and Radiog. Lec. and Rec. | | | 2 | 32 | | |
| Orthodontia Lectures and Recitations... | 1 | 16 | 1 | 16 | | |
| Pathology and Therapeutics..... | 3 | 48 | | | | |
| Theory and Practice of Dentistry and Conference Course in Applied Eco- nomics, Jurisprudence, Psychology, Ethics and Art, Public Hygiene..... | | | 2 | 32 | | |
| | 18 | 672 | 18 | 672 | 36 | 1,344 |
| | | | | | 142 | 4,944 |

* Students who have had Elementary Chemistry will be allowed four advanced credits.

† Substitute allowed by the Student Work Committee.

One credit hour may be either one recitation hour through one semester, two laboratory hours with outside work, or three laboratory hours without outside work. One semester, sixteen weeks; one week, forty-eight hours.

DEPARTMENTAL STATEMENTS

Odd numbers indicate first-semester courses; even numbers, second-semester courses. A combination of the two (e.g., 5-6) indicates courses continuing through the year. In the case of courses repeated the second semester, the suffix *a* indicates first semester; the suffix *b*, second semester.

ANATOMY

Professors CLARENCE M. JACKSON, THOMAS G. LEE; Associate Professor CHARLES A. ERDMANN; Instructor CHESTER A. STEWART; Assistants JOHN A. KITTELSON, EDGAR H. NORRIS, LLOYD M. RUTLEDGE, FAUS P. SILVERNALE.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|------|-------------------------------|---------|------------|-----------------|
| 5-6. | Gross Anatomy | 10 | Fr. | An. Biol. |
| 8. | Histology and Embryology..... | 4 | Fr. | An. Biol. |

5-6. GROSS ANATOMY. Lectures, recitations, demonstrations, and laboratory work in gross human anatomy. Includes descriptive anatomy, including osteology, with special emphasis upon the skull and the digestive tract; later a complete and careful dissection of the head and neck. Open only to dental students and especially arranged for their needs. JACKSON, ERDMANN, VAUGHN.

8. HISTOLOGY AND EMBRYOLOGY. Lectures, recitations, laboratory work, and demonstrations. Special emphasis will be laid upon the knowledge of the development and structure of the head, mouth, jaw, teeth, and other portions of the digestive system. JACKSON, LEE, STEWART, KITTELSON, MCKINLEY.

ANIMAL BIOLOGY

Professors HENRY FRANCIS NACHTRIEB, CHARLES P. SIGERFOOS; Assistant Professor ELMER J. LUND; Instructors GEORGE DELVIN ALLEN; Assistants ADOLPH RINGOEN, HELEN SANBORN.

COURSES

| <i>Introductory Course</i> | | | | |
|----------------------------|-----------------------|---------|------------|-----------------|
| No. | Title | Credits | Offered to | Prereq. courses |
| 1-2. | General Zoology | 6† | All | None |

† Both semesters must be completed before credit is given for the first semester.

INTRODUCTORY COURSE

1-2. GENERAL ZOOLOGY. A survey of the animal kingdom, emphasizing the principles of structure, physiology, embryology, classification, and evolution of animals. Textbook, lectures, and quizzes. SIGERFOOS, LUND, ALLEN, RINGOEN, SANBORN.

CHEMISTRY

Professor GEORGE B. FRANKFORTER; Instructors LILLIAN COHEN, FRANK H. McDUGALL, CARL L. SCHUMANN.

COURSES

Division of General and Inorganic Chemistry

| No. | Title | Credits | Offered to | Prereq. courses |
|--------|--|---------|----------------------------------|------------------------------|
| 21-22. | Inorganic and Qualitative Chemistry | 10† | Those entering without Chemistry | None |
| 3-4. | Adv. Gen. Chem. and Qualitative Analysis | 6† | Fr., soph., jr. | Entrance credit in Chemistry |
| 37. | Organic Chemistry | 3 | Soph. | 3-4 |

† Both semesters must be completed before credit is given for the first semester.

21-22. INORGANIC AND QUALITATIVE CHEMISTRY. This includes a study of the non-metals, metals, and qualitative analysis, together with a thoro discussion of the fundamental laws and theories of chemistry. FRANKFORTER, COHEN.

3-4. ADVANCED GENERAL CHEMISTRY AND QUALITATIVE ANALYSIS. Lectures and laboratory work. A discussion of the general chemical theories and laws, with qualitative analysis. FRANKFORTER, McDUGALL, and Assistants.

37. ORGANIC CHEMISTRY. A course in the essentials of organic chemistry, with especial reference to compounds important in dentistry. Lectures, recitations, and laboratory work. FRANKFORTER, SCHUMANN, and Assistants.

CROWN AND BRIDGE WORK

Professor FORREST H. ORTON; Associate Professors PETER J. BREKHUS, ALFRED A. PAGENKOPF, GEORGE W. REYNOLDS, AMOS S. WELLS, CHARLES A. WIETHOFF; Assistant Professors WILLIAM McDUGALL, WILLIAM A. ROLL; Instructors EVERETT E. MACGIBBON, HERBERT C. NELSON, CARL OTTO.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|---------------------------------|---------|------------|-----------------|
| 1. | Crown and Bridge Technique..... | 4 | Jr. | Dent. Anat. 3 |
| 2. | Crown and Bridge Practice..... | 3 | Jr. | 1 |
| 3. | Crown and Bridge Practice..... | 3 | Sr. | 2 |
| 4. | Crown and Bridge Practice..... | 3 | Sr. | 3 |

1. CROWN AND BRIDGE TECHNIQUE. A course of lectures, demonstrations, and laboratory work that includes all the more important forms of crowns and bridges. PAGENKOPF, WELLS, REYNOLDS, NELSON, OTTO, MACGIBBON.

2. CROWN AND BRIDGE PRACTICE. A course of lectures and clinical practice covering the simpler forms of crown and bridge work. PAGENKOPF, WELLS, REYNOLDS, NELSON, OTTO, MACGIBBON.
3. CROWN AND BRIDGE PRACTICE. A course of lectures and clinical practice covering the entire field of crown and bridge work. ORTON, BREKHUS, McDOUGALL, WIETHOFF, ROLL.
4. CROWN AND BRIDGE PRACTICE. Continuation of Course 3 as outlined above. ORTON, BREKHUS, McDOUGALL, WIETHOFF, ROLL.

DENTAL ANATOMY

Associate Professor GEORGE M. DAMON; Assistant Professors OSCAR COOPERMAN, CARL H. PETRI, CHARLES E. RUDOLPH; Instructors LEE H. HARKER, PAUL S. PARKER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|----------------------|---------|------------|-----------------|
| 1. | Dental Anatomy | 1 | Fr. | None |
| 2. | Dental Anatomy | 2 | Fr. | 1 |
| 3. | Dental Anatomy | 3 | Soph. | 2 |

1. DENTAL ANATOMY. A course of lectures and recitations on the anatomy and nomenclature of the teeth. DAMON.
2. DENTAL ANATOMY. The course will consist of lectures, recitations, and such laboratory work as drawing, dissection, modeling, and carving of the teeth. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER, PARKER.
3. DENTAL ANATOMY. Continuation of Course 1 as outlined above. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER, PARKER.

DENTAL METALLURGY

Professors ALFRED OWRE, HARRY C. LAWTON.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-------------------------|---------|------------|-----------------|
| 1. | Dental Metallurgy | 1 | Jr. | Chem. 21-22 |

1. DENTAL METALLURGY. Lectures, recitations, and demonstrations, taking up the most important metals with special reference to those used in dentistry. OWRE, LAWTON.

DRAWING AND DESCRIPTIVE GEOMETRY

Professor WILLIAM H. KIRCHNER; Instructors LAWRENCE T. MORTENSON, RUTCHER SKAGERBERG.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|--------|-------------------------|---------|------------|-----------------|
| 21-22. | Technical Drawing | 4 | All | None |

21-22. TECHNICAL DRAWING. Theoretical and practical graphics, the reading and making of working plans. Projection, sketching, lettering, conventions, renderings, and translations. KIRCHNER, MORTENSON, SKAGERBERG.

MILITARY SCIENCE AND TACTICS

Major GEORGE W. MOSES, U. S. Cavalry, Professor of Military Science and Tactics, Head of the Department.

Assistants, Captain THEODORE B. TAYLOR, U. S. Cavalry, Professor of Military Science and Tactics; Captain JAMES B. WOOLNOUGH, U. S. Infantry, Professor of Military Science and Tactics; First Lieutenant OWEN R. MEREDITH, U. S. Infantry, Professor of Military Science and Tactics.

University Staff, BERT A. ROSE, Band Instructor.

REQUIRED WORK

All physically fit male students are required to take military training during the first two undergraduate years of their course unless they have secured such training at an approved institution endorsed by the Military Department. When this course is entered upon it must be carried to completion as a prerequisite for graduation. No credits are allowed for this work.

ELECTIVE WORK

(a) All juniors and seniors who have completed two years of drill may register for the course required by General Orders No. 49 War Department for members of the Reserve Officers' Training Corps. Such students sign a written agreement to continue in this corps for the remainder of the college course, the completion of this work is a prerequisite to promotion. Any student who for satisfactory reasons is permitted to withdraw from this course must reimburse the War Department for all moneys received.

Juniors and seniors who take the course required by General Orders No. 49, which includes two camps of four weeks each, will receive an allowance of thirty cents per day for subsistence while pursuing the course and will have all expenses paid to and from the encampments. They also are eligible for appointment as temporary second lieutenants in the Infantry branch of the Regular Army for six months with a salary of one hundred dollars per month upon graduation and commission in the Reserve Corps. The Reserve Corps furnishes officers for Citizens' Training Camps in time of peace and commission in the United States

Volunteers in time of war, such officers having preference for commissions in the volunteers immediately below experienced officers in the federal service.

The course includes three hours a week of drill and three of study in the Military Department and also includes recommended courses offered by the respective colleges which have a direct bearing on the work of the Corps, such as Military History and International Law in the Liberal Arts College. The work carries three credits in each semester in the Military Department, and such additional credits as the respective curricula of the colleges may permit.

(b) Any student having completed the two years of required Military Training may continue the work for credit in the third and fourth years. Credit for such work is allowed in practically all of the colleges of the University, the maximum being three credits a year.

OPERATIVE DENTISTRY

Professors JAMES M. WALLS, HENRY S. GODFREY; Associate Professor ROBERT O. GREEN; Assistant Professors RALPH W. COUNTRYMAN, NORMAN J. COX, RICHARD S. MAYBURY, MARK O. PATTRIDGE, JOSEPH F. SHELLMAN; Instructors WILLIAM C. NAEGELI, JOSEPH M. LITTLE, RAYMOND R. HENRY, PAUL S. PARKER, RAY E. RAMAKER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|---------------------------|---------|------------|-----------------|
| 2. | Operative Technique | 4 | Soph. | Dent. Anat. 3 |
| 3. | Operative Practice | 2 | Jr. | 1 |
| 4. | Operative Practice | 3 | Jr. | 2 |
| 5. | Operative Practice | 4 | Sr. | 3 |
| 6. | Operative Practice | 4 | Sr. | 4 |

2. OPERATIVE TECHNIQUE. This course consists of lectures, recitations, demonstrations, and laboratory work of a technical nature. WALLS, GREEN, COUNTRYMAN, NAEGELI, PARKER, HENRY, RAMAKER.
3. OPERATIVE PRACTICE. This course consists of lectures, recitations, and clinical practice. WALLS, GREEN, COUNTRYMAN, SHELLMAN, NAEGELI, PARKER, HENRY, RAMAKER.
4. OPERATIVE PRACTICE. A course of lectures, recitations, conference work, demonstrations, and clinical practice covering the entire field of operative dentistry. WALLS, GODFREY, COX, HENRY, LITTLE, MAYBURY, PATTRIDGE, RAMAKER.
5. OPERATIVE PRACTICE. Continuation of Course 3 as outlined above. WALLS, GODFREY, SHELLMAN, COX, LITTLE, MAYBURY, NAEGELI, PATTRIDGE.

6. OPERATIVE PRACTICE. A course in the general practice of operative dentistry. WALLS, GODFREY, SHELLMAN, COX, LITTLE, MAYBURY, NAEGELI, PATTRIDGE.

ORAL SURGERY

Professor THOMAS B. HARTZELL; Associate Professors CHARLES A. GRIFFITH, HERMAN A. MAVES; Assistant Professor RAY R. KNIGHT; Instructors K. PAUL CARSON, WILLIAM A. GREY, HAROLD J. LEONARD, MARY V. HARTZELL.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|----------------------------|---------|------------|-----------------|
| 2. | Practice | 3 | Jr. | Path., Bact. |
| 3. | Oral Surgery | 2 | Sr. | 2 |
| 4. | Oral Surgery Practice..... | 4 | Sr. | 3 |

2. PRACTICE. Demonstrations and practice in prophylaxis, treatment of pyorrhea, oral examinations and physical diagnosis, extraction of teeth, local and general anaesthesia, radiography, hospital dental practice, and oral surgery. HARTZELL, GRIFFITH, KNIGHT, MAVES, LEONARD, GREY, CARSON, HARTZELL.
3. ORAL SURGERY. This course is taught by lectures and recitations covering the field of surgical diseases of the oral cavity, extraction of teeth, anaesthesia, radiography, and, in conjunction with the course in Pathology and Therapeutics, the subject of metastatic infections due to mouth infections. HARTZELL, GRIFFITH.
4. Continuation of Course 3 as outlined above. HARTZELL, GRIFFITH, KNIGHT, MAVES, LEONARD, GREY, CARSON, HARTZELL.

ORTHODONTIA

Professor OSCAR A. WEISS; Associate Professors WILLIAM F. LASBY, HARRY C. LAWTON; Assistant Professor CARL O. FLAGSTAD; Instructor BERT G. ANDERSON, RALPH W. DELTON, MAX E. ERNST.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-----------------------------|---------|------------|-----------------|
| 1. | Orthodontia Technique | 2 | Jr. | Pros. Tech. 4 |
| 3. | Orthodontia Practice | 2 | Sr. | 1 |
| 4. | Orthodontia Practice | 2 | Sr. | 2 |

1. ORTHODONTIA TECHNIQUE. A course of lectures, recitations, and laboratory work in the technique of steel and the making of regulating appliances. LAWTON, DELTON.
3. ORTHODONTIA PRACTICE. A course of lectures, recitations, and clinical work on the theory and practice of orthodontia. Every student is

required to treat at least one irregularity of the teeth. WEISS, LASBY, FLAGSTAD, ANDERSON, ERNST.

4. ORTHODONTIA PRACTICE. A continuation of Course 2 as outlined above. WEISS, LASBY, ANDERSON, ERNST.

PATHOLOGY, BACTERIOLOGY, AND PUBLIC HEALTH

Professor HAROLD E. ROBERTSON; Associate Professors ELEXIOUS T. BELL, WINFORD P. LARSON; Assistant Professor MOSES BARRON; Instructors ARTHUR T. HENRICI, MARGARET WARWICK, PERCY A. WARD, ANNE G. BENTON; Assistants HAROLD S. DIEHL, KANO IKEDA.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|--|---------|------------|-----------------|
| 3. | Bacteriology | 4 | Jr. | Hist. 51 |
| 4. | Pathology | 4 | Jr. | Chem. 21-22 |
| 3. | BACTERIOLOGY. DENTAL STUDENTS. The principles which govern the isolation and study of bacteria, with particular attention to the bacteria and other parasites of the mouth and teeth. Brief studies of pathogenic organisms which produce, or appear in rheumatism, their relation to infections of the teeth. 96 hours, 4 credits. HENRICI, DIEHL, IKEDA. | | | |
| 4. | PATHOLOGY. DENTAL STUDENTS. The study and recognition of gross and microscopic disease processes. The principles of general pathology with special consideration of diseases peculiar to the mouth and teeth and important in dental practice. 96 credits, 4 credits. HENRICI, WARD, IKEDA. | | | |

PATHOLOGY AND THERAPEUTICS

Professor THOMAS B. HARTZELL; Instructor HAROLD J. LEONARD.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|---|---------|------------|---------------------------|
| 1. | Pathology and Therapeutics..... | 3 | Sr. | Path., Bact. 51-52, 58-59 |
| 1. | PATHOLOGY AND THERAPEUTICS. Lectures and recitations involving general pathology as a foundation of the special pathology of the teeth, periodental structures, and oral cavity, and including metastatic infections and neurological disturbances due to infections and irritations in the mouth. HARTZELL, LEONARD. | | | |

PHARMACOLOGY

Professor ARTHUR R. HIRSCHFELDER; Associate Professor EDGAR D. BROWN; Assistant Professor ROBERT A. HALL.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|----------------------------|---------|------------|-----------------|
| 2. | General Pharmacology | 3 | Jr. | Chem. 21, 22 |

2. GENERAL PHARMACOLOGY as applied to dentistry comprises a study of the properties, action, and therapeutic application of the principal drugs used in dentistry with exercises in prescription writing. HALL.

PHYSICAL EDUCATION

FOR MEN

Director LOUIS J. COOKE; Assistant Director WILLIAM K. FOSTER; Instructor JOHN C. WEST.

The purpose of the department is to provide all men of the University opportunity for exercise in order to maintain and build up their general health. It also provides special training for the correction of physical defects and functional derangements.

A physical examination is required of all new matriculants, and of all others using the department privileges, at the beginning of the year, and as often during their college course as their physical condition may indicate. Students taking the required work in physical education are examined also at the close of the year. A study of these records shows a marked improvement in the standard of health of the average student during his college course.

The gymnasium, swimming pool, and baths are open to all students of the University, who are free to use the apparatus and to pursue a course in physical training under the supervision of the director and his assistants.

Those students taking the required course in physical education who can not swim, must make a reasonable effort, as determined by the department, to pass the swimming and life-saving requirements, and will be assigned special hours for instruction.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|------------------------|---------|------------|-----------------|
| 1. | Personal Hygiene | 1 | All | None |

1. PERSONAL HYGIENE. Two hours per week; first six weeks of first semester. Examination at close of course. COOKE.

A special lecture on sex hygiene is given sometime during the first ten days of the autumn semester, with required attendance on the part of all freshmen.

PHYSIOLOGY

Professor ELIAS P. LYON; Associate Professors RICHARD OLDING BEARD, FREDERICK H. SCOTT; Assistant Professors M. RUSSELL WILCOX, JOHN F. MCCLENDON; Instructors CHAUNCEY J. V. PETTIBONE, FRANCIS B.

KINGSBURY; Assistants EDWARD D. ANDERSON, ALBERT M. SNELL, EDWARD F. SLATER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|-----------------------------|---------|------------|-----------------|
| 4. | Physiologic Chemistry | 3 | Soph. | Chem. 21, 22 |
| 6. | Physiology | 4 | Soph. | An. Biol. |

4. **PHYSIOLOGIC CHEMISTRY.** A course of lectures and laboratory studies of the compounds occurring in the animal body*, of the food-stuffs: the digestion and of urinalysis. PETTIBONE, KINGSBURY, and Assistants.
6. **PHYSIOLOGY.** Lectures and laboratory exercises. The study of the general functional properties of tissue cells; of muscle-nerve functions; of blood, the circulation, respiration, digestion, secretion, and excretion. LYON, BEARD, SCOTT, MCCLENDON, and Assistants.

PROSTHETIC DENTISTRY

Professor OSCAR A. WEISS; Associate Professors GEORGE M. DAMON, WILLIAM F. LASBY, HARRY C. LAWTON; Assistant Professors OSCAR COOPERMAN, CARL O. FLAGSTAD, CARL H. PETRI, CHARLES E. RUDOLPH; Instructors BERT C. ANDERSON, RALPH W. DELTON, LEE A. HARKER, PAUL S. PARKER, ANDREW J. WEISS.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|----------------------------|---------|------------|-----------------|
| 1. | Prosthetic Technique | 3 | Fr. | None |
| 2. | Prosthetic Technique | 3 | Fr. | 1 |
| 3. | Prosthetic Technique | 3 | Soph. | 2 |
| 4. | Prosthetic Technique | 2 | Soph. | 3 |
| 5. | Prosthetic Practice | 2 | Jr. | 4 |
| 6. | Prosthetic Practice | 1 | Jr. | 5 |
| 7. | Prosthetic Practice | 1 | Sr. | 6 |
| 8. | Prosthetic Practice | 1 | Sr. | 7 |

1. **PROSTHETIC TECHNIQUE.** This course consists of lectures and technique work in the laboratory, comprising impression materials and their uses and the different processes of plate work. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER, PARKER.
2. **PROSTHETIC TECHNIQUE.** Continuation of Course 1 as outlined above. DAMON, COOPERMAN, PETRI, RUDOLPH, HARKER, PARKER.
3. **PROSTHETIC TECHNIQUE.** The course consists of lectures, recitations, and laboratory work covering the principles and practice of plate work. LAWTON, DELTON, HARKER, PARKER.
4. **PROSTHETIC TECHNIQUE.** Continuation of Course 3 as outlined above. LAWTON, DELTON, HARKER, PARKER.

5. PROSTHETIC PRACTICE. A course of lectures, recitations, and clinical work covering the simpler forms of prosthetic practice. WEISS, LASBY, FLAGSTAD, ANDERSON.
6. PROSTHETIC PRACTICE. A course of lectures, recitations, and clinical work covering cleft palate and other special cases in addition to the general prosthetic practice. WEISS, LASBY, FLAGSTAD, ANDERSON.
7. PROSTHETIC PRACTICE. A course in general practice of prosthetics. WEISS, LASBY, FLAGSTAD, ANDERSON.
8. PROSTHETIC PRACTICE. A continuation of Course 7 as outlined above. WEISS, LASBY, FLAGSTAD, ANDERSON.

RHETORIC AND PUBLIC SPEAKING

Professor JOSEPH M. THOMAS; Instructors CYRIL A. HERRICK, FRANK SMOYER.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|--|---------|------------|-----------------|
| 3. | Composition and Rhetoric..... | 3 | Fr. | None |
| 4. | Composition and Rhetoric..... | 3 | Fr. | None |
| 3. | RHETORIC AND COMPOSITION. Training in writing; study of the work of writers who have handled scientific subjects with clearness and power; outside reading. HERRICK, SMOYER. | | | |
| 4. | RHETORIC AND COMPOSITION. A continuation of Course 3. HERRICK, SMOYER. | | | |

THEORY AND PRACTICE OF DENTISTRY

Professors ALFRED OWRE, BROR E. DAHLGREN, and Associates.

COURSES

| No. | Title | Credits | Offered to | Prereq. courses |
|-----|---|---------|------------|-----------------|
| 2. | Theory and Practice of Dentistry.... | 2 | Sr. | None |
| 2. | THEORY AND PRACTICE OF DENTISTRY. A lecture and conference course in the theory and practice of dentistry, Public Hygiene, Applied Economics, Jurisprudence, Psychology, Ethics, and Art. OWRE, DAHLGREN, and Associates. | | | |

STUDENTS

SENIORS

Abell, W. J.
 Anderson, L. C.
 Bergerson, L.
 Bergh, I. G.
 Birnberg, J. V.
 Bodien, A. T.
 Borovsky, Abe
 Brink, F. T.
 Bruss, E. T.*
 Buehler, J. E.*
 Chisholm, D. R.*
 Cohler, M. J.
 Colburn, D. N.
 Connell, J. E.
 Cook, G. W.
 Dampier, D. G.
 Danz, Beatrice
 Diamond, H. A.
 Durfee, L. M.
 Farrell, S. M.*
 Fee, G. B.
 Feeney, H. S.
 Fossun, E. A.
 Freier, E. F.
 Gabrielson, L. C.
 Gardner, H. E.
 Geddes, D. D.
 Gerde, M. A.*
 Girvin, C. W.*
 Hansen, A. P.*
 Hansen, E. L.
 Harper, F. W.
 Hartig, R. P. J.

Hartwig, J. I.
 Haven, W. K.
 Healy, C. J.
 Hendricks, L. M.
 Herrmann, M. P.*
 Hillman, H. C.
 Hoglund, H. A.
 Holliday, Houghton*
 Iverson, W. G.
 Jernall, R. M.*
 Johnson, R. L.
 Just, Dagny
 Kubesh, E. J.
 Leighton, E. G.
 LeMay, R. B.*
 Lillehei, C. I.*
 Lindelein, C. O.
 Lindquist, R. W.
 Lorhammer, G. A.
 McKenzie, M. D.*
 Meintsma, Richard
 Miller, M. A.
 Neiman, Robert
 Nelson, C. A.*
 Nylander, V. T.
 Olson, Alfred
 Paske, C. H.*
 Peterson, C. R.
 Peterson, W. F.
 Pfeiffer, R. H.*
 Pierson, L. L.
 Plonty, Earl
 Radke, L. M.

Radke, W. L.*
 Reinking, H. N.
 Reynolds, W. D.
 Ribbel, G. H.
 Ringstrom, G. M.
 Robinson, J. F.
 Roelike, S. J.
 Saevig, J. G.
 Schuft, A. F.
 Sell, C. A.
 Shackell, Harold
 Shanahan, R. F.
 Simonson, A. E.*
 Skon, A. E.*
 Stevens, Marion
 Swanson, C. A.
 Talle, Ingeborg
 Thorson, M. H.
 Tucker, C. M.
 Tucker, C. A.
 Wedin, A. C.
 Weibeler, C. J.
 Weisman, H. L.
 Wendell, Lehman*
 West, E. C.*
 Whitaker, V. D.
 White, Mrs. E. S.*
 White, F. I.
 Wilson, O. P.*
 Wolter, A. F.
 Zettler, W. W.
 Ziskin, D. E.

* Served as a Senior Adviser.

JUNIORS

Abrahams, O. H.
 Albrecht, A. W.
 Anderson, C. O.
 Anderson, E. J.
 Anderson, G. R.
 Anderson, R. H.
 Bang, C. B.
 Beckenstein, I. S.
 Brady, F. P.
 Brandenburg, G. A.
 Brooks, F. I.
 Buck, W. V.
 Carlson, M. H.
 Dwire, G. J.
 Eklund, C. L.
 Farmer, E. A.
 Faus, N. A.
 Finnegan, R. L.
 Flandrick, C. R.
 Gilbert, L. I.
 Gullings, I. O.
 Hagberg, W. V.
 Halvorsen, Jorgen
 Haugberg, Elmer
 Hiebert, G. J.
 Hoitomt, R. M.
 Homme, A. H. F.

How, R. M.
 Johnson, G. A.
 Johnson, Harvey
 Johnson, H. E.
 Johnson, R. E.
 Kelsey, C. W.
 Kirkpatrick, F. K.
 Kirkpatrick, V. L.
 LaFreniere, J. G.
 Lauer, V. G.
 Lee, C. W.
 Lee, E. T.
 Lucian, Arthur
 McGinn, J. A.
 McKinney, W. H.
 Meachem, L. F.
 Melander, O. A.
 Miner, C. L.
 Moos, L. C.
 Nash, E. G.
 Neller-moe, J. O.
 Nelson, C. W.
 Nelson, J. W.
 Ness, H. B.
 Nishioka, Masahito
 Northfield, I. H.
 Obermeyer, F. C.
 Olsen, R. C.

Passer, C. W.
 Pattridge, W. H.
 Pearson, E. H.
 Peterson, J. A.
 Peterson, L. C.
 Priske, L. R.
 Robb, G. L. Jr.
 Salisbury, J. A.
 Shaw, W. S.
 Silsby, Jay
 Silver, V. L.
 Simon, A. F.
 Snyder, C. E.
 Storberg, V. H.
 Swennes, H. G.
 Swenson, C. R.
 Thomas, H. E.
 Thornby, I. J.
 Thorson, H. A.
 Wachtler, W. R.
 Wellman, H. W.
 Werner, C. O.
 Williams, S. G.
 Woodruff, H. S.
 Woods, L. F.
 Wrucke, A. L.
 Zimmerman, Emanuel

SOPHOMORES

| | | |
|------------------|------------------|-------------------|
| Anderson, A. F. | Hedburg, R. L. | Rogstad, O. V. |
| Anderson, Harry | Jamieson, C. H. | Rose, O. A. |
| Anderson, L. C. | Johnson, A. W. | Rostad, H. D. |
| Aronson, A. V. | Kline, R. P. | Rowell, W. J. |
| Babcock, W. L. | Kraft, R. M. | Sahr, W. L. |
| Bierman, C. W. | Krause, L. C. | Searing, R. T. |
| Brandt, H. R. | Larson, F. A. | Sivinski, M. A. |
| Britzius, K. E. | Larson, W. J. | Skoedopole, F. L. |
| Carpenter, E. R. | Levy, M. M. | Smith, L. H. |
| Comartin, E. E. | Long, G. D. | Stafford, O. K. |
| Conway, J. H. | Lynde, J. K. | Stone, H. C. |
| Cook, M. E. | McGill, E. C. | Stunkard, B. W. |
| Daly, T. L. | Mara, S. G. | Swenson, R. B. |
| Daum, L. A. | Medalie, W. L. | Thiers, F. C. |
| Davidson, F. V. | Meisser, J. G. | Thomas, A. L. |
| Dille, W. O. | Melby, A. J. | Thurston, R. F. |
| Dobson, N. J. | Miszewski, A. H. | Ulvestad, R. A. |
| Egdahl, H. I. | Mohn, E. J. | Van Slyke, A. C. |
| Elliott, V. D. | Mountain, M. D. | Veblen, I. S. |
| Foster, J. M. | Murphy, S. L. | Weiser, G. C. |
| Foster, L. W. | Newman, A. T. | Wild, H. C. |
| Francis, V. B. | Olson, O. T. | Williams, H. N. |
| Fuller, B. F. | Paine, Ralph | Williams, W. T. |
| Gletne, J. S. | Pederson, J. P. | Witter, L. E. |
| Graham, P. G. | Pink, David | Wolff, H. H. |
| Hallum, O. F. | Reed, R. R. | Wrbitzky, B. P. |
| Hawley, R. K. | Rodman, D. E. | |

FRESHMEN

| | | |
|------------------|--------------------|-------------------|
| Abbott, V. B. | Hurst, W. W. | Muller, E. |
| Ahmman, N. T. | Ioset, R. G. | Nellermoe, D. L. |
| Albinson, R. N. | Ioset, R. F. | Nelson, A. L. |
| Bergan, E. L. | Jacobson, R. A. | Nelson, V. O. |
| Blunt, J. K. | James, F. S. | Norden, L. A. |
| Bradley, H. | Johnson, Alvin F. | Oster, L. T. |
| Bryant, J. W. | Johnson, Arthur F. | Patterson, A. G. |
| Brzenski, B. J. | Johnson, E. L. | Prechel, A. E. |
| Bugenstein, S. | Johnson, Myrtle K. | Quigley, M. W. |
| Bussard, O. T. | Johnson, R. M. | Ramsett, H. E. |
| Bylund, S. O. | Jungmann, S. | Redman, D. A. |
| Cohen, M. J. | Katz, A. | Reed, R. M. |
| Collin, S. G. | Kehne, H. A. | Risk, P. A. |
| Crolley, W. P. | Kellett, G. B. | Rosenbloom, S. S. |
| Donaldson, C. F. | Kelly, M. P. | Schwedes, C. H. |
| Downing, L. W. | Kelly, R. W. | Segall, S. |
| East, C. D. | Kracek, F. C. | Smith, Dayton |
| Fogarty, E. C. | Lan, B. | Sprafka, J. T. |
| Fruchtman, L. | Landers, H. J. | Staples, C. W. |
| Gjedrem, C. L. | Larson, H. O. | Stemper, J. N. |
| Glanz, T. C. | Lawler, M. E. | Sullivan, E. J. |
| Goldberg, M. W. | Lund, E. | Swanson, C. V. |
| Gordon, M. G. | Lundquist, E. C. | Swanson, E. C. |
| Grumstrup, E. | Luttio, V. A. | Swanson, H. E. |
| Hagen, W. H. | McCray, L. H. | Thornton, M. H. |
| Hanson, R. V. | McIntire, H. E. | VonBank, W. J. |
| Hass, A. A. | Malloy, J. P. | Whitney, E. L. |
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